JAMES H. AKIN.

Improvement in Car Couplings.

No. 124,310. Patented March 5, 1872.

Fig. 1.

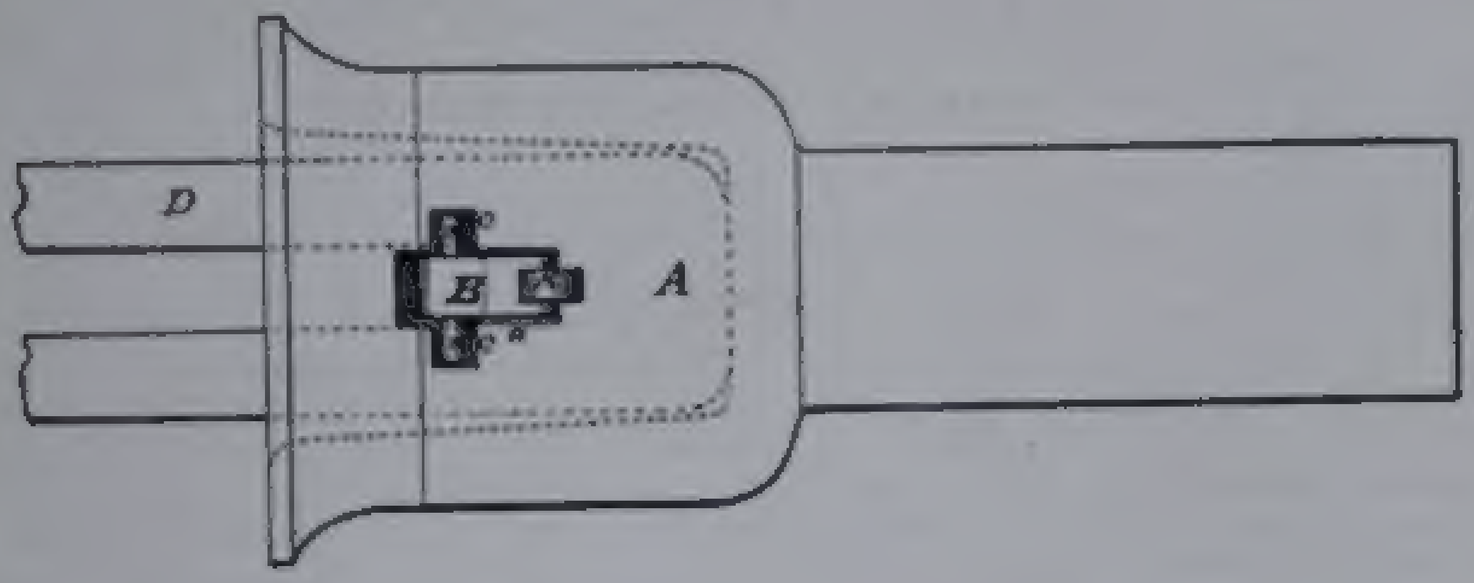


Fig. 2.

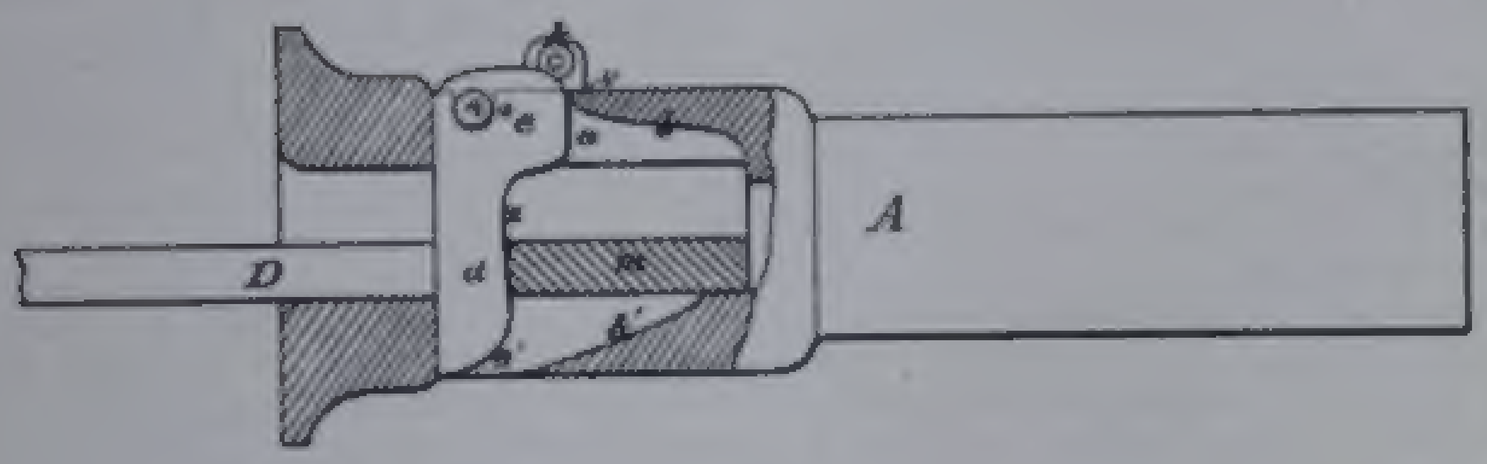


Fig. 3.

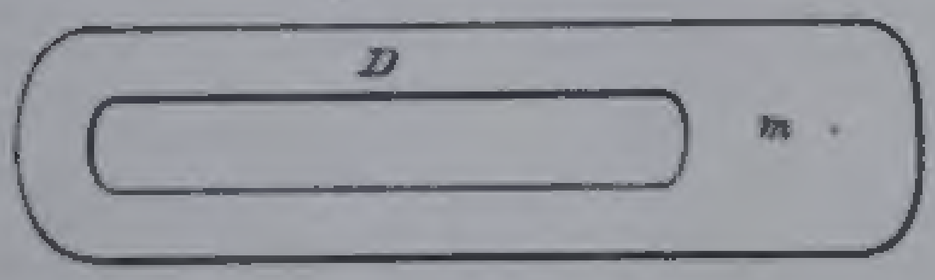
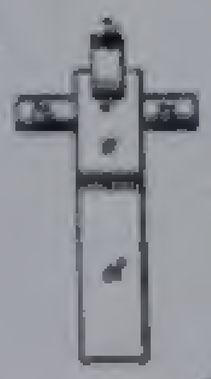


Fig. 4.



WITNESSES.

G. Ellesham.

E. H. Bates

INVENTOR.

James H. Akin.

by L. F. Hollingsworth

atty.

124,310

UNITED STATES PATENT OFFICE.

JAMES H. AKIN, OF WYANDOTTE CITY, KANSAS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 124,310, dated March 5, 1872.

To whom it may concern:

Be it known that I, JAMES H. AKIN, of Wyandotte city, in the county of Wyandotte and State of Kansas, have made certain Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, forming part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing represents a top view of my car-coupler. Fig. 2 is a vertical longitudinal section, and Figs. 3 and 4 are details.

This invention has relation to means for coupling and uncoupling cars; and it consists in the construction and novel arrangement of the draw-head with its recessed journal-seats and the weighted removable pivoted pins, adapted to operate in connection with a link, having the metal massed in unequal quantities at its ends, all as hereinafter described.

In the accompanying drawing, the letter A designates the draw-head, which may have the usual bell-mouth form. This draw-head is slotted at *a a'* in its upper and lower sides for the passage of the pin. The front and side walls of these slots are vertical, but the rear walls are hollowed out inside the draw-head in a beveled or shelving manner at *b b'*. By this means in the upper wall a recess is provided for the reception of the body of the pin when it is thrown up by the stroke of the link, and in the lower wall allowance is made for the sweep of the toe of the pin, while the upper and lower inside surfaces of the draw-head approximate each other sufficiently to correspond with the thickness of an ordinary link, and prevent undue play. On each side of the upper slot is formed a journal-seat, *c*, for a trunnion of the pin. This journal-seat is made by recessing the wall of the draw-bead at the side of the slot in the manner illustrated, so that the pin may easily be drawn upward in a vertical direction when required. B represents the pin, consisting of a body, *e*, and toe *d*. The forward and lateral walls of the pin are vertical and plane, to correspond with the forward and lateral walls of the slots of the draw-head. The rear wall is notched out underneath, forming a shoulder under the rear portion of the body *e*. The toe *d* extends downward from the front portion of the body, which is set well back of the trunnions *s s* extending out from its side, and balances the pin, so that when it hangs freely its front wall will assume the perpendicular. A ring, *k*, is formed at the rear and upper corner of the body of the pin for the attachment of an operating-rope. A shoulder, *r*, is formed under the rear portion of the ring, which, when the pin is down, rests on the rear edge of the wall of the upper slot. The upper portion of the front wall of the body of the pin is curved to admit of the pivotal motion without opening the slot at this point. The rear wall *z* of the toe of the pin is made slightly concave or beveled outward and downward, in order that the draft may cause the link to ride upward on the pin, thus tending to keep the latter down to its seat. D represents the link. This is an ordinary slot-link, with the metal massed at one end in a plate form at *m*. This link is secured in the draw-head by raising the pin vertically, and introducing the large end of the link into the bell-mouth. The pin will then fall into place forward of the thick end *m* of the link, and will secure the same, so that there will be little or no longitudinal movement of the link in this draw-head. In the coupling operation, the small end of the link enters the opposite draw-head, carrying back the toe of the pin until it is raised sufficiently for the link to pass under. The pin then falls forward, securing the link. In uncoupling, if the link is fully out, so that there is not distance for the pin to swing back, the pin may be raised vertically; but in ordinary cases it will be only necessary to swing the toe of the pin back by pulling on the operating-rope attached at the rear of the body of the pin to the ring *k*. The solid end of the link is made heavy enough to counterbalance the weight forward of the pin, so that the link will always project horizontally in the prop-

A. ALEXANDER.

Improvement in Rock and Ore Crushing Rolls.

No. 125,160. Patented April 2, 1872.

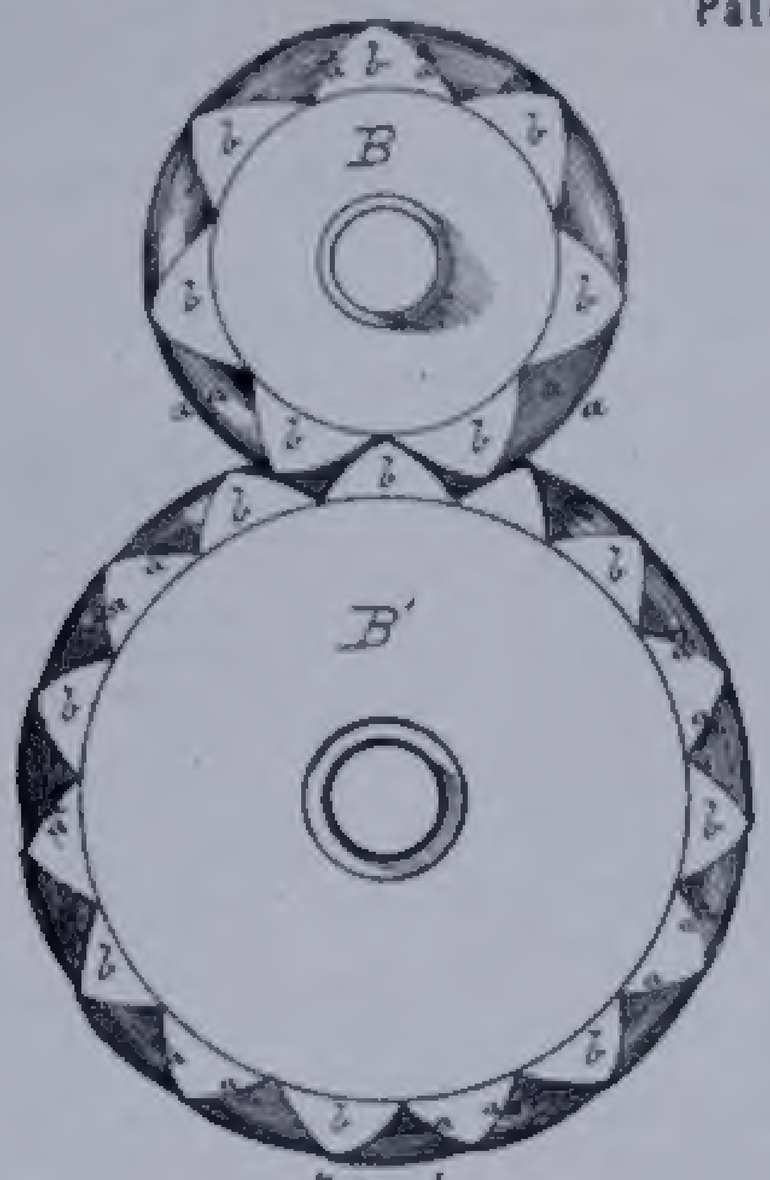


Fig. 1.

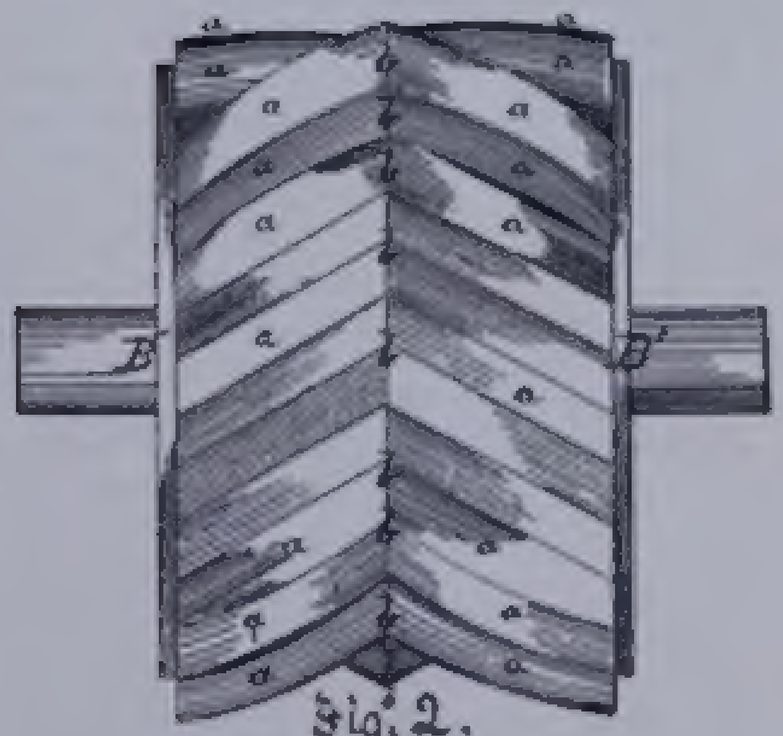


Fig. 2.

Witnesses:
R. F. Osborn
Thos. Ellis

Inventor:
Abram Alexander,
by Bakewell & Church,
his Attys.

125,160

UNITED STATES PATENT OFFICE.

ABRAM ALEXANDER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JOSEPH A. ROBINSON, AND JAMES EWING, OF SAME PLACE.

IMPROVEMENT IN ROCK AND ORE CRUSHING-ROLLS.

Specification forming part of Letters Patent No. 125,160, dated April 2, 1872; antedated March 26, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, ABRAM ALEXANDER, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rock and Ore Crushing-Wheels; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part hereof, in which—

Figure 1 is an end view of my improved rock and ore crushing wheels, and Fig. 2 is a face view of one of the wheels.

Like letters of reference indicate like parts in each.

The object of my invention is to combine in the operation of a pair of crushing-wheels, both a crushing and grinding action; and this I do by making on each wheel a series of double spiral ribs of corresponding size—the operative face of each side of each rib being made convex, so that while the ribs mesh into and against each other, and so crush the material, the opposite ribs so meshing together shall roll or slide on each other, and thus operate with a grinding action.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and mode of operation.

The wheels B B′ are made of cast-iron, chilled or not, at pleasure, or of other material, such as will give them a hard, durable face. The ribs *b* extend in a double spiral form from or near the middle of each wheel outwardly, as shown.

Each of the two opposite faces *a* of each rib, is made slightly convex from at or near the base of the rib to its point, and such faces may unite at their upper and lower edges angularly, or with an interposed curved surface. The wheels may be mounted in suitable housings, and may be operated by power communicated in any known way.

By the construction described, I secure not only a crushing action, but also combine therewith a grinding motion, since, from the convex form of the rib-faces, such faces will rub one on or in close proximity to another, and thereby grind the ore or rock, and secure the more complete pulverization thereof. This effect is also aided by the spiral direction given to the ribs. The grinding action begins from the time the faces of the opposite ribs take a bite on the material to be pulverized, and continues at all points in the revolution of the wheels, until it is discharged in a finely-pulverized state, instead of in the form of cakes or sheets, as is the case with crushing-rollers as heretofore made.

What I claim as my invention, and desire to secure by Letters Patent, is—

The construction and arrangement of the crushing-wheels B and B′, provided with double spiral convex-faced ribs *b*, as herein described, and for the purpose set forth.

In testimony whereof I, the said ABRAM ALEXANDER, have hereunto set my hand.

ABRAM ALEXANDER.

Witnesses:

THOS. B. KERR,

JOHN GLENN.

WILLIAM W. ANDREW.

Improvement in Cultivators.

No. 124,241. Patented March 5, 1872.

Fig 1.

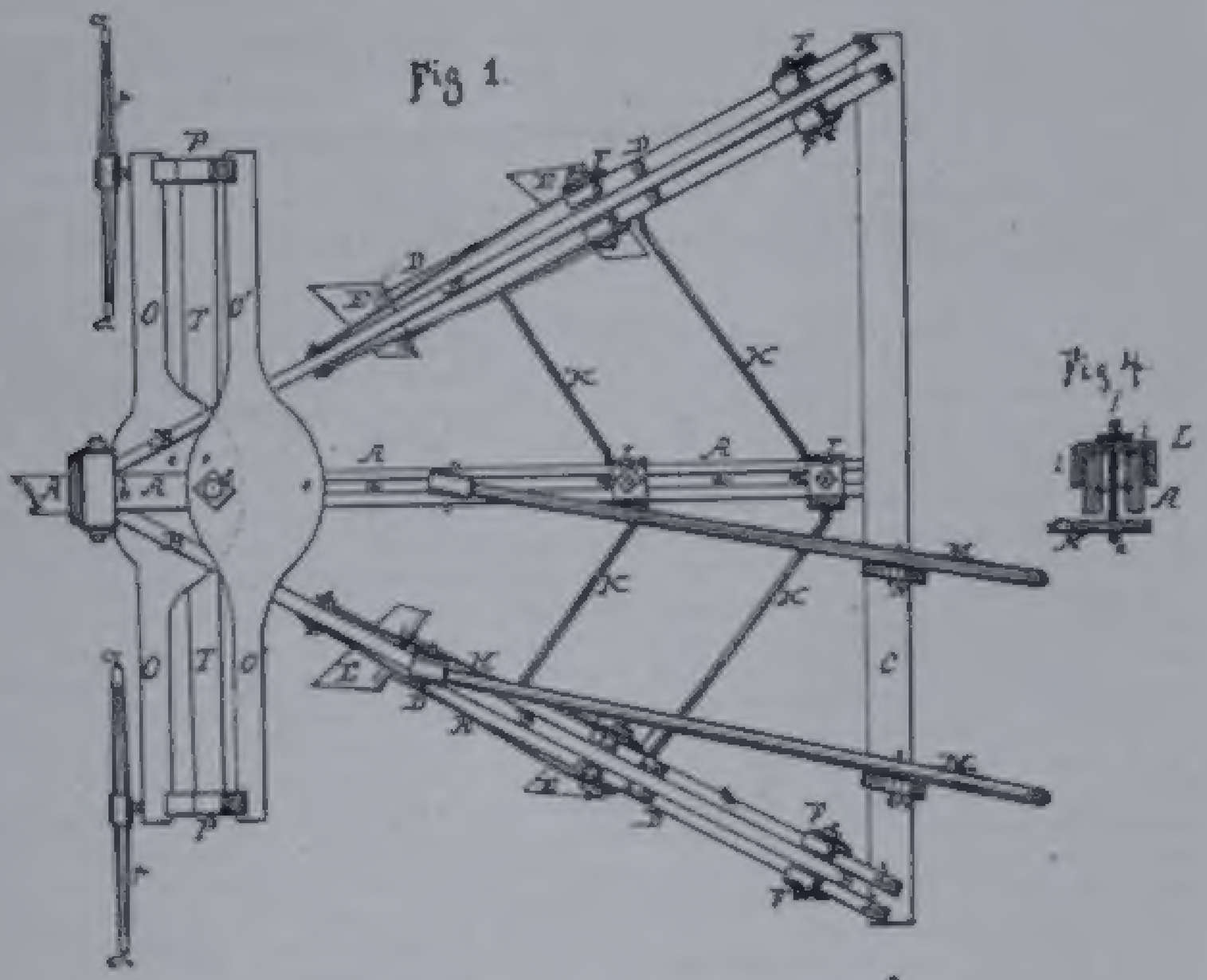


Fig 3.

Fig 4.

Fig 2.

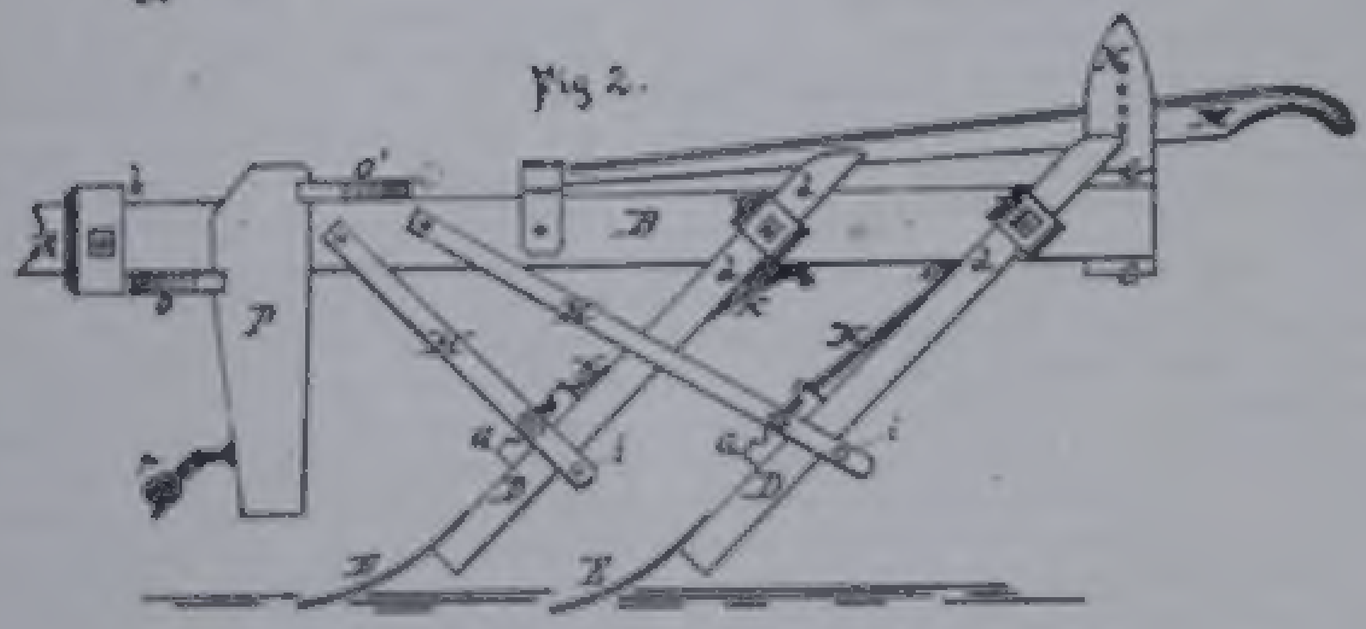


Fig 5.

WITNESSES:

J. C. Stevens

D. A. Bridges

INVENTOR:

William W. Andrew

124,241

UNITED STATES PATENT OFFICE.

WILLIAM W. ANDREW, OF LA PORTE, INDIANA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 124,241, dated March 5, 1872; antedated February 22, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, WILLIAM W. ANDREW, of La Porte, in the county of La Porte and State of Indiana, have invented certain Improvements in Corn-Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which, together with the letters and figures marked thereon, forms part of this specification, and in which—

Figure 1 represents a top or plan view of my invention; Fig. 2, a side elevation of same; Fig. 3, a front view of one of the cleft-shovel standards detached; Fig. 4, a transverse section of the slotted center-beam showing the stay-rod detent; Fig. 5, a front view of the draft attachment detached.

Like letters of reference made use of in the several figures indicate like parts.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same with particularity, making use in so doing of the aforesaid drawing.

General Description.

A is the center-beam, being a continuation of the tongue. This beam is made with a vertical longitudinal slot, *a*, extending from front to rear of the plow. B B are two diverging or diagonal beams attached to the center-beam at a point forming the apex *b* of the plow. The base of the triangle is formed by the rear frame pieces C C, one placed above and the other below, serving to securely tie the parts together. D are the shovel-standards carrying the usual shovel-plows E. The upper portion of these standards is cleft into two parts, *d d*, one of which parts passes on each side of the diagonal beams B, when the standards are in position, and the standards are secured to said beams by bolts passing laterally through the cleft portions and through the beam. To prevent the parts *d* from splitting by the insertion of this bolt, I apply to each of said parts a permanent metal clamp, F, which clasps the edges and side thereof. I usually make these clamps of ordinary cast-iron molded in proper form, as shown in the drawing, and having a hole drilled or cast therein for the passage of the bolt. This not only obviates the liability to split, but also makes the bearing more durable, and is an inexpensive and practical way of securing the standard to the beams. At the lower portion of the front of the standard and above the shovel is attached the notched plate G, having several graduating notches therein. H are braces, double to each standard, placed one upon each side of said standards and proceeding to a point in front upon the beam B, where each pair is attached by a bolt passing through the two parallel braces and the beam. These braces are attached to the standards as follows: They project for a short distance to the rear of the standards, and a wooden pin, *i*, prevents said standard from moving backward, while in front of said standard the two braces are kept together by the end of one of the stay-rods, K, which passes through the said parallel braces, and is formed with a shoulder at the inner side, which rests up against the inside brace, while a nut is screwed upon said rod at the outer extremity and up against the outer brace. The said braces are thus, by means of the nut, held firmly against the sides of the standards. The portion of the stay-rod which is between the braces rests in one of the notches of the notched plate G, and the inclination of the standards to the land may be regulated to a greater or lesser angle by changing the stay-rods from one of these notches to another. The stay-rods K proceed from the standards to the center-beam A, where they are secured by detents, L, consisting of a vertical bolt, *j*, passing down through the slot *a*, fitted at bottom with the two eyes or loops *e e* to receive the ends of the two stay-rods, one from each side, and at the top passing through the plate *l* and secured by a nut, by means of which said nut the eyes *e* may be drawn into the slot, so as to force the rods against the under surface of the center-beam A and secure them rigidly. M are the handles of the plow made adjustable as to height by means of pins through the supports N.

The draft attachment, of which a front view is shown at Fig. 5, consists of the two horizontal bars O O', connected at the ends by the vertical pieces P, which support the single-trees *p*, said vertical pieces being provided with means for attaching the single-trees at greater or less height, as desired. The bar O is placed

C. W. BALDWIN. 2 Sheets--Sheet 1.

Improvement in Shipping Apparatus.

No. 125,252. Patented April 2, 1872.

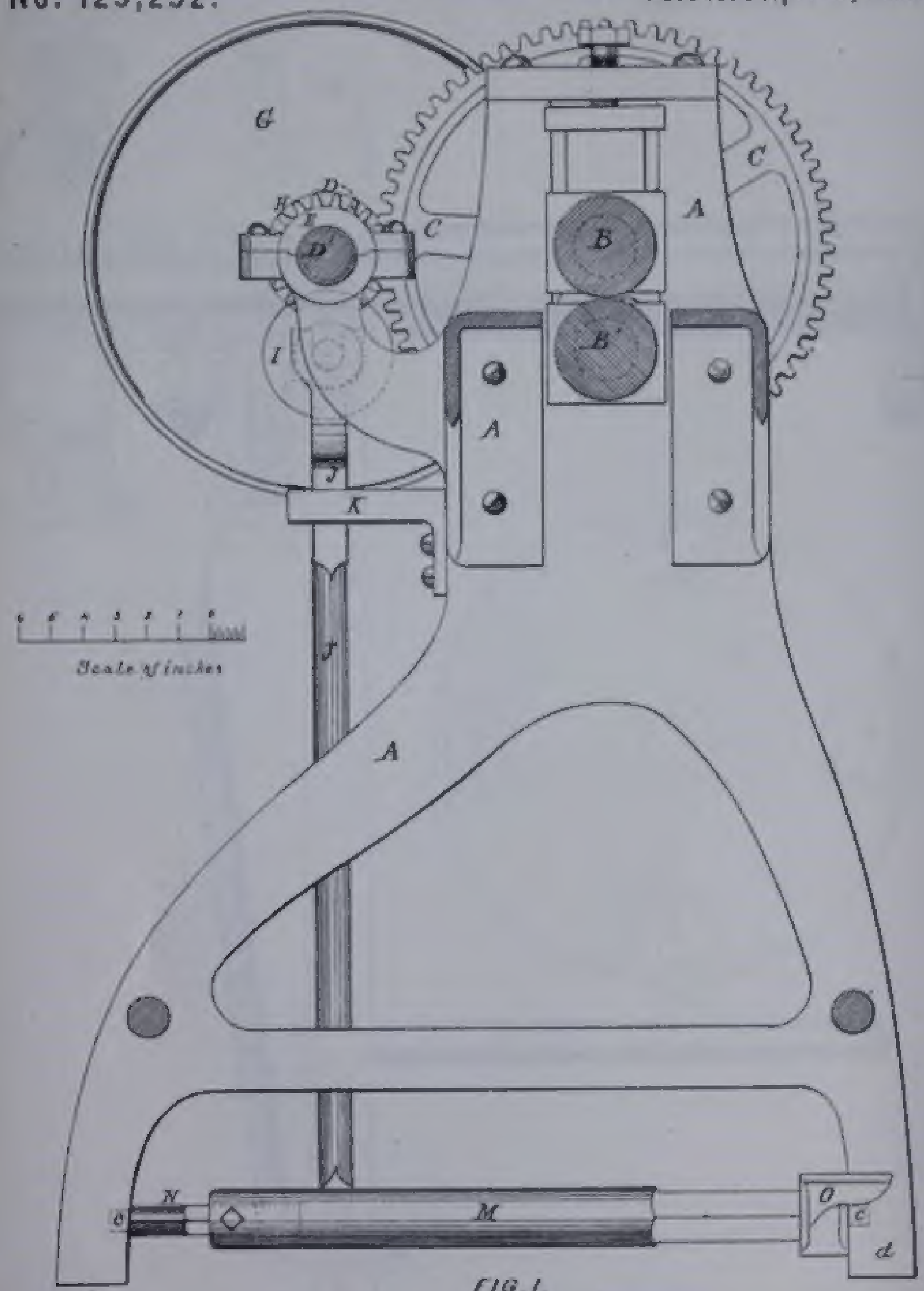


FIG. 1.

WITNESSES:

N. C. Lombard

David F. Pray

INVENTOR.

Lyman W. Baldwin

125,252

UNITED STATES PATENT OFFICE.

CYRUS W. BALDWIN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO AMERICAN BOOT AND SHOE MACHINE WORKS, OF SAME PLACE.

IMPROVEMENT IN SHIPPING APPARATUS.

Specification forming part of Letters Patent No. 125,252, dated April 2, 1872.

Specification describing a new and useful Shipping Apparatus for engaging and disengaging a friction-pulley or clutch, invented by CYRUS W. BALDWIN, of Boston, in the county of Suffolk and State of Massachusetts.

My invention relates to a means of moving a loose pulley upon its shaft in a direction parallel to its axis, for the purpose of causing it to engage with a disk or friction-pulley secured upon said shaft so as to revolve with it or with a clutch similarly secured thereon; and it consists, first, in the employment of an anti-friction truck, fitted to revolve in suitable bearings in a frame or rod, so arranged as to be capable of a rectilinear motion toward and from the axis of the shaft on which said loose pulley revolves, the outer periphery of said anti-friction truck consisting of two beveled surfaces in the form of a V, one of said surfaces coming in contact with a corresponding surface on a hub which is firmly secured to said shaft, and the other in contact with a corresponding surface on the hub of the pulley, and, by virtue of its wedge-shape, cause the pulley to move upon its shaft in the direction of its length when said trunk is moved toward the center of the shaft, and entirely doing away with end thrust of the shaft. My invention relates, in the second place, to a novel mode of hanging the treadle rocker-shaft, by means of which the truck above mentioned is moved toward or from the center of the pulley-shaft; and it consists in forming said shaft in two parts, the principal or larger one of which has a journal formed upon one end, to fit a bearing cast in the frame, and also has a socket cast in the other end, of suitable depth and shape to receive one end of the other or smaller part of said rocker-shaft, which also has a journal formed on one end thereof, to fit a bearing cast in the other leg of the frame, and so fitted to the socket in the larger part as to form a slip-joint, in such a manner that the two ends of the rocker-shaft may be inserted in fixed bearings cast in the frame, and secured therein, without the trouble and expense of fitting a cap to said bearings. My invention relates, in the third place, to the means employed to cause adhesion between the fixed and loose portions of the friction-pulley; and it consists in the formation in the casting of either the loose or fixed portion of the pulley, of pockets or recesses, arranged at intervals around the axis of the pulley and equidistant therefrom, and filling said recesses with wood, leather, or other suitable adhesive material, the outer ends of said blocks of wood, &c., having a V-shaped groove turned therein concentric with the axis of the pulley, and to fit a correspondingly-shaped annular projection on the other portion of the pulley, as will be more fully described.

In the drawing, Figure 1 is a transverse section of a machine for rolling leather, with my improvements applied thereto. Fig. 2 is a longitudinal section on line *x x* on Fig. 1; and Fig. 3 is an elevation of the loose portion of the driving-pulley, showing the manner of applying the friction-blocks thereto.

A is the frame of the machine, and B and B' are the pressure-rolls. C is a spur-gear; D, a pinion; and D', the pinion-shaft, by means of which the rolls are made to revolve, all constructed and operated in a well-known manner. The pinion-shaft D' is mounted in the bearings E, one on either side of the machine, and has the disk F firmly secured to the outer end thereof, said disk having the annular V-shaped rib *a* upon its inner face, said V-shaped rib being turned truly concentric with its axis. G is the driving-pulley, fitted to revolve freely on the shaft D', and having a series of pockets or recesses formed between the rim and hub upon the side of the web or spokes, and arranged at intervals around, and equidistant from the axis of the shaft, said pockets being filled with blocks *b* of wood, leather, or any other suitable adhesive material, and having a V-shaped groove turned therein concentric with said axis and corresponding in diameter and shape to the rib *a* on the disk F. The hub of the pulley G, opposite to the friction-surface just described, is beveled at an angle of about thirty degrees from a perpendicular. H is a hub or collar, forming a part of the pinion D, and firmly secured to the shaft D', and having a beveled end corresponding with and facing toward that on the hub of the pulley, the two beveled surfaces inclosing an angle of about sixty degrees. Directly beneath the shaft D' is the truck I, the outer periphery of which consists of two beveled sur-

H. C. BANKERD.

Improvement in Brick Machines.

No. 125,255. Patented April 2, 1872.

Fig. 1

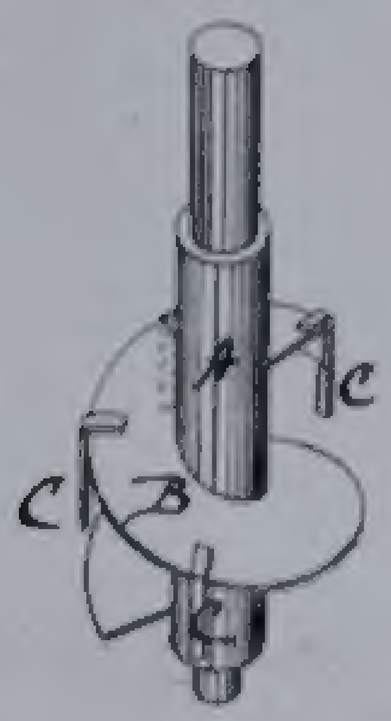
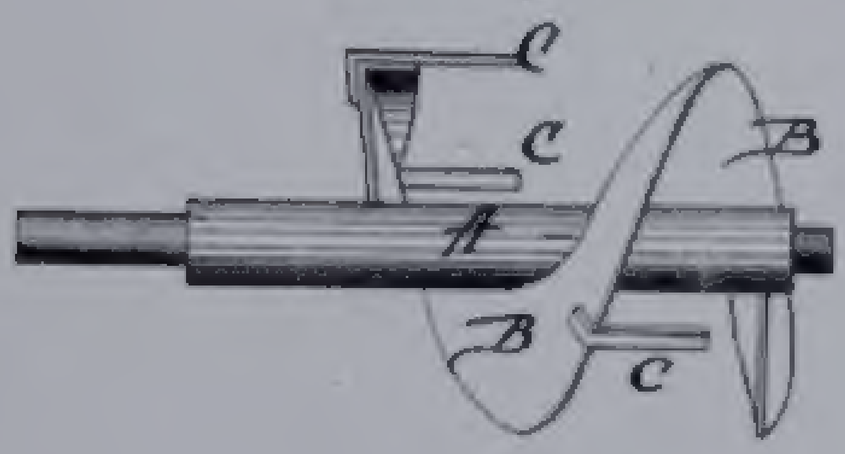


Fig. 2



Witnesses:

Henry A. Miller

C. L. Ewert.

Inventor

Herman C. Bankerd

per Alexander Mason

Attorneys.

125,255

UNITED STATES PATENT OFFICE.

HERMAN C. BANKERD, OF MORGANTOWN, WEST VIRGINIA.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 125,255, dated April 2, 1872.

To all whom it may concern:

Be it known that I, HERMAN C. BANKERD, of Morgantown, in the county of Monongalia, and in the State of West Virginia, have invented certain new and useful Improvements in Brick-Machine; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "mud-stirrer" for brick-machines, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view, and Fig. 2 a side view.

A represents an upright shaft, which passes through the center of the mud-box in a brick-machine. Around this shaft is secured, in auger form, a flange, B, which is made concave on its under side the better to force the mud or clay downward. From the outer edge of the flange B, at suitable intervals, depend vertical knives C C, which cut the clay and keep it loose from the sides of the box.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The concave flange B, provided with vertical knives C C, and attached in auger form to the shaft A, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of August, 1871.

H. C. BANKERD.

Witnesses:
M. HAYES,
A. FAIRCHILD.

JAMES BARROWS.

Improvement in Hinges.

Patented Feb. 27, 1872.

No. 124,111.

Fig. 1

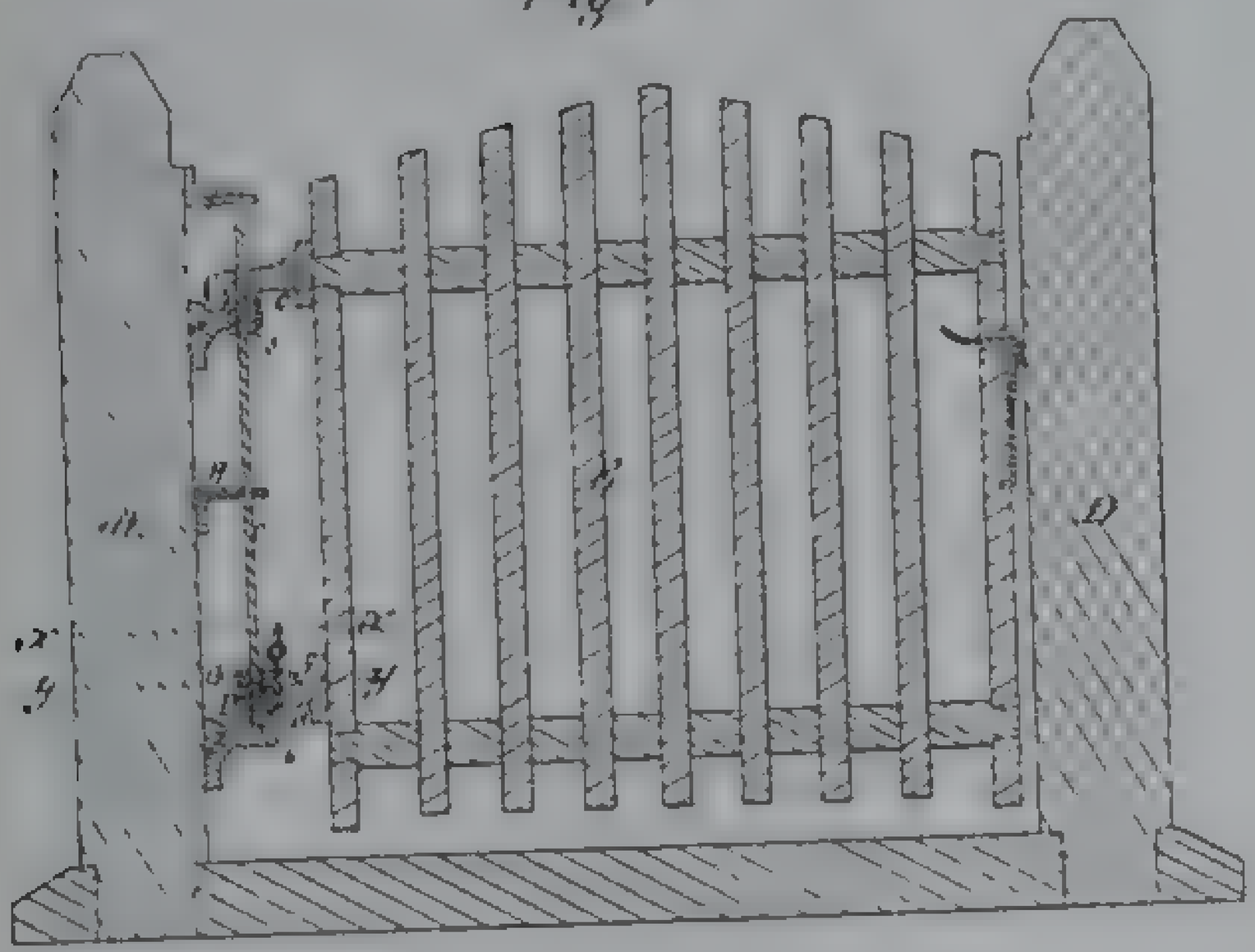


Fig. 2

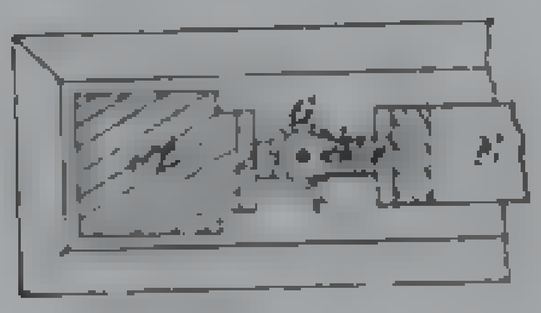
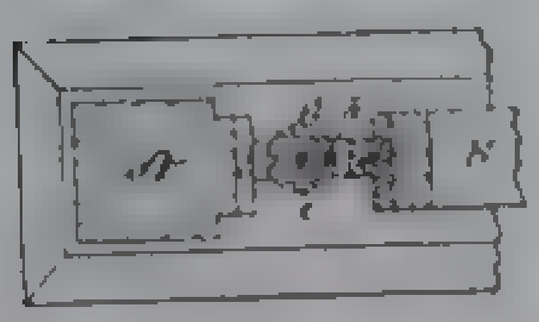


Fig. 3



Witnesses
[illegible]

Inventor,
[illegible]
per his Attorneys
[illegible]

121,111

UNITED STATES PATENT OFFICE.

JAMES BARROWS, OF HYDE PARK, MASSACHUSETTS.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. 121,111, dated February 27, 1872.

To all whom it may concern:

Be it known that I, JAMES BARROWS, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented an Improved Combined Spring and Hinge for Gates and Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a longitudinal vertical section through the center of a gate with my combined spring and hinges applied thereto. Fig. 2 is a transverse section on the line *x x* of Fig. 1. Fig. 3 is a transverse section on the line *y y* of Fig. 1.

My invention has for its object to provide a means for producing the required torsion in either direction of a vertical wire or rod, when used in connection with the hinges of a gate or door, to serve the double purpose of a pintle for all the knuckles and a torsion spring; and consists in a notched wheel and pin, or equivalent devices, placed or arranged in line with the common axis of the vertical wire spring and hinges, whereby any required degree of torsion in either direction may be produced to hold the gate when closed; whereas, as heretofore, in this position of the gate the spring was without torsion.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A B are the gate posts, to one, A, of which are secured the stationary portions *a b* of the two hinges C D. *c d* are the movable portions of the hinges secured to the gate E, and resting upon the stationary portions *a b*, a projection, *b*, on the under side of the portion *c*, and a similar projection, *b*, on the upper side of *b*, fitting into openings of corresponding size formed in the ends of the portions *a d*, these projections serving as axes for the gate to swing or pivot on in either direction. *e* is a rod or wire, suitably tempered, extending between the hinges C D, the upper end of the wire being secured to a stationary bracket, *i*, projecting from the gate-post A above the hinge C, the lower end of the wire being secured to a notched wheel, G, placed in an opening formed in the movable portion *d* of the hinge D. This notched wheel may be turned in either direction, to produce the required twist or torsion of the wire spring, by means of a wrench or otherwise; and, when turned sufficiently, is securely held to the movable portion *d* by a pin, *h*, which passes through one of the notches of the wheel. H is a guide, secured to the post A midway between the hinges, for steadying and keeping the wire in place.

From the foregoing, it will be seen that the torsion of the wire is sufficient to close the gate after being opened in either direction; and, when the gate is intended to open in one direction only, it is simply necessary to increase the amount of torsion by turning the notched wheel G to hold the gate closed without the use of a latch, a suitable stop being provided to prevent the gate from swinging open in the opposite direction. By placing the center of the notched wheel in line with the common axis of the wire spring and hinges, I am enabled to produce a torsion of the spring in either direction, which cannot be done when the twisting device is situated at one side of the axis of the hinges, as heretofore.

I am aware that the regulating device for the torsion spring is, of itself, not new.

Claim.

What I claim is—

The compound hinge composed of the bracket, step guide, and knuckles upon the post, the torsion spring, pintle, and the regulating wheel G within the knuckles, all as shown, and for the purpose set forth.

Witness my hand this 19th day of January, A. D. 1871.

JAMES BARROWS.

In presence of—

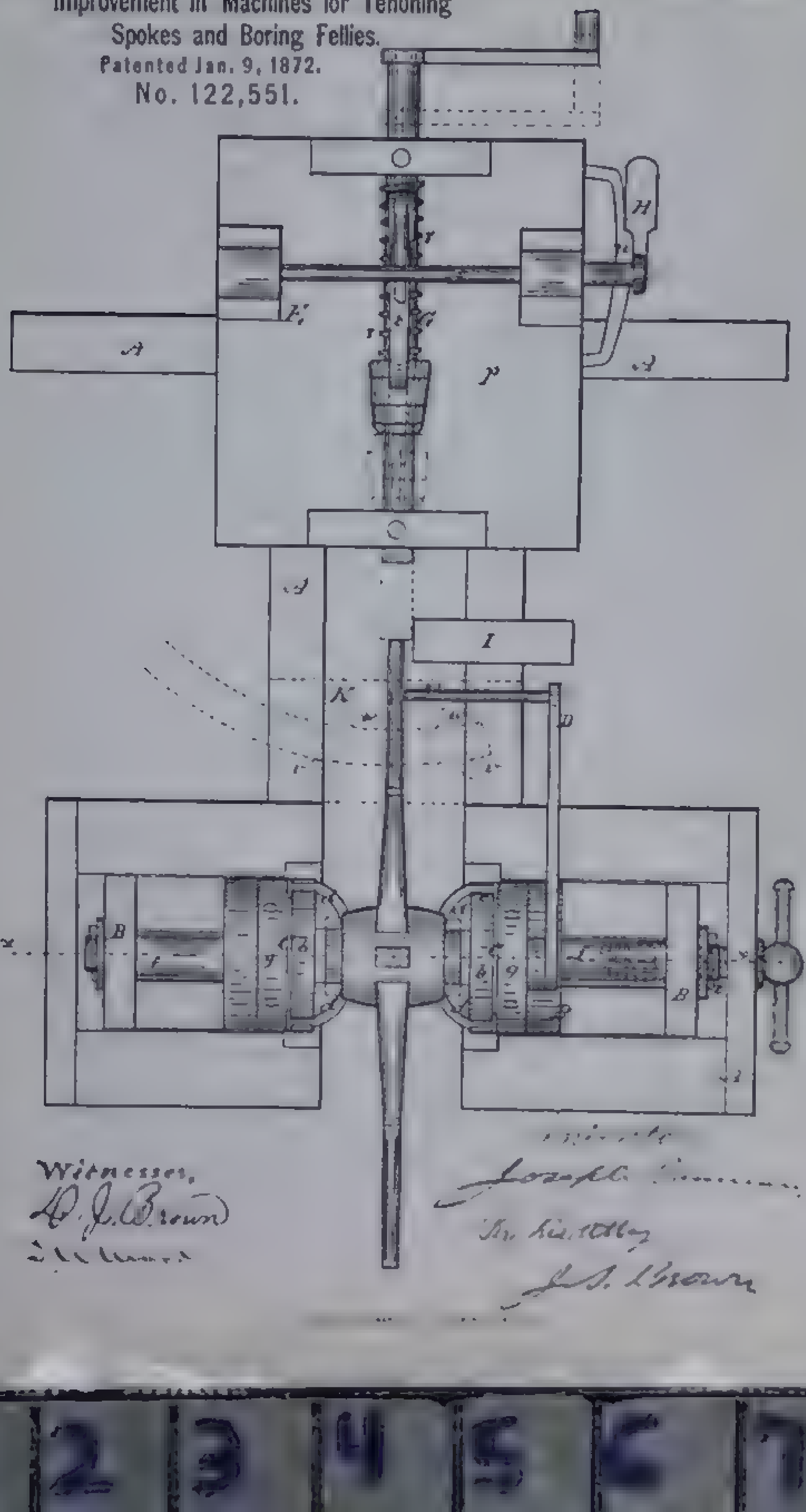
P. P. TESCHEMACHER,
N. W. STEARNS.

(31.) JOSEPH BAUMAN. 3 Sheets--Sheet 1.

Improvement in Machines for Tenoning Spokes and Boring Fellies.

Patented Jan. 9, 1872.

No. 122,551.



Witnesses,
D. J. Brown
[illegible]

Joseph Bauman
By his Attorney
D. J. Brown

122,551

UNITED STATES PATENT OFFICE.

JOSEPH BAUMAN, OF SHEPHERDSTOWN, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR TENONING SPOKES AND BORING FELLIES.

Specification forming part of Letters Patent No. 122,551, dated January 9, 1872

To all whom it may concern:

Be it known that I, JOSEPH BAUMAN, of Shepherdstown, in the county of Cumberland and State of Pennsylvania, have invented an Improvement in Machines for Tenoning Spokes and Boring Fellies; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this specification—

Figure 1 being a top view of the machine; Fig. 2, a side view of the same; Fig. 3, a transverse vertical section of the same in a plane indicated by the line *x x*, Fig. 1; Figs. 4, 5, and 6, views of parts detached; Fig. 7, a view representing a modification of one part of the machine.

Like letters designate corresponding parts in all of the figures.

A suitable frame, A, substantially of the construction shown, is provided, having a longitudinal vertical opening, *a*, in the middle at one end for the reception and free manipulation of the wheels to be formed. Upon the other end of the frame is located the spoke-tenoning and felly-boring device. At the open end of the frame are two transverse ways, on the two sides of the open space, in which ways are located sliding bearings B B for holding and adjusting the position of the hub of the wheels to be put together. Each bearing B is provided with a chuck, C, for clamping upon and holding in a concentric position one end of a hub. This chuck or clamping device, as I construct it, is substantially as represented in Figs. 3, 4, 5, and 6. There is a disk, *b*, having three or more radial openings or notches, *c c c*, in which slide jaws *d d d* for grasping the end of the hub. This disk has a shaft or long journal, *f*, which extends outward through and turns in its sliding bearing B. Behind the disk *b* is another disk, *g*, which turns freely on the journal *f* of the said disk *b* and has a spiral groove, *h*, Fig. 6, in its face, into which spiral groove suitably-formed projections on the jaws *d* of the said two disks enter. The disk *g* has holes in its periphery, as shown, for inserting a pin or lever to hold or turn the disk one way while the disk *b* is turned or held the other way, and the disk *b* may have similar holes; or both disks may have any equivalent means to hold and turn them by. When the disks are turned in opposite directions the jaws *d d d* traverse the spiral groove *h* in the disk *g*, the effect of which, when turning in one direction, is to move the jaws radially outward and, when turning in the other direction, to move the jaws inward equally and thus clamp the hubs, whatever may be the size thereof. A hub, being clamped in the two chucks, is readily moved by the bearings B B on the transverse ways of the frame, so as to adjust it in exactly the right position for cutting the tenons on its spokes by the tenon-cutting device in place. This adjustment is made by a single screw, *i*, turning in the side of the frame and operating in a nut, *k*, projecting down from the sliding bearing B above, as shown in Fig. 3. If it is preferred to have a simple hub-holder fitting in the bores of the hubs, a device, as represented in Fig. 7, may be employed. Thus, in the bearing B turns a shaft, *l*, having a screw-projection, *m*, which is turned into the bore of the hub and holds it, while the shaft *l* serves, also, as a journal to turn in the bearing B. This device answers for a cheap machine, but the outside clamping device is preferable. On one of the bearings B B is located a spoke-guide, D, which is pivoted to the bearing so as to swing in a plane parallel with the plane of the spokes. It has a gage-rod, *n*, projecting inward to the position of the spokes. When a spoke is to be driven into the hub the guide D may be brought into an upright position, as in Fig. 3, to determine the exact position of the spoke; and then it may be turned aside so as not to be in the way of driving the spoke. Thus the gage or guide is always ready at hand to guide the adjustment of the spokes, and never in the way thereof. The spoke-tenoning and felly-boring device E is located on a frame or base, *p*, which is adjustable to any position on the main frame A by a clamp and wedge underneath the main frame or any equivalent means. The tenon-cutter and boring-bit are secured in turn to a crank-shaft, G, which has a longitudinal movement equal to the distance it is required to travel in the operations, and a coiled spring, *r*, sits thereon and by its power feeds the shaft and the cutter or bit attached thereto automatically. It is drawn back after each cutting or boring by a lever hold back, H, operating by an arm, *s*, on its shaft or journal, and a con

I. E. BOWER.

Improvement in Hubs for Carriage Wheels.

No. 125,164. Patented April 2, 1872.

Fig. 1.

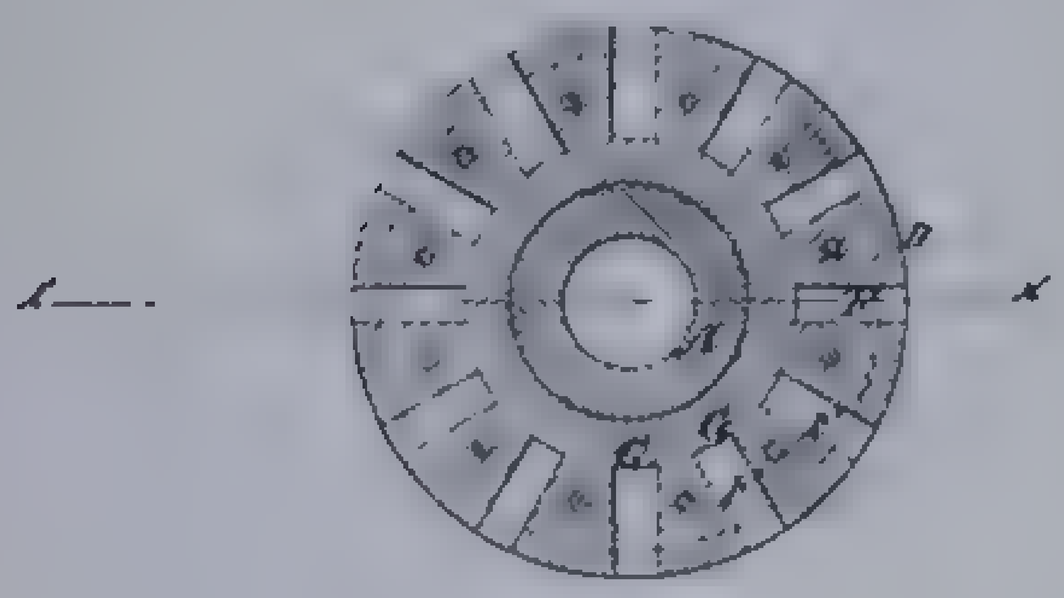
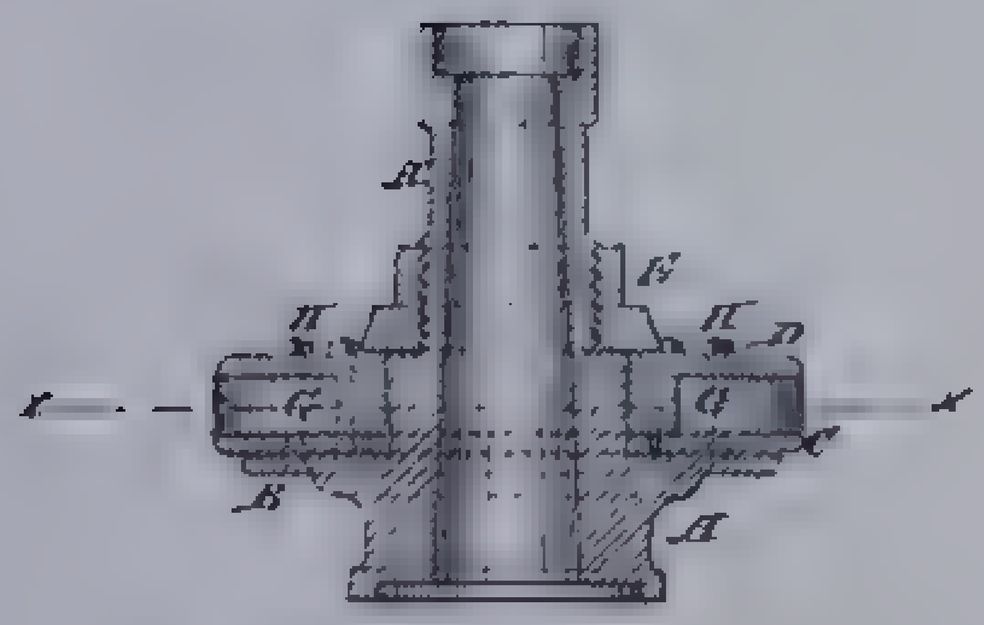


Fig. 2.



Witnesses:
P. Pritchard
Alex F. Roberts

Inventor:
Isaac E Bower
Per Munn & Co
Attorneys.

123,164

UNITED STATES PATENT OFFICE.

ISAAC E. BOWER, OF BAINBRIDGE, GEORGIA.

IMPROVEMENT IN HUBS FOR CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 123,164, dated April 2, 1872.

Specification describing a new and useful Improvement in Carriage-Wheels, invented by ISAAC E. BOWER, of Bainbridge, in the county of Decatur and State of Georgia.

The invention relates to that class of wheels which have the hub in two parts, so as to receive the spoke-holder between them. It consists in the improvement upon the spoke holder, which is hereinafter fully described and pointed out in the claim.

In the accompanying drawing, Figure 1 is a cross section of the hub taken on the line *x x* of Fig. 2. Fig. 2 is a longitudinal section of the hub taken on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the box and principal portion of the hub, which is bored out to receive the nut and axle and the nut and washer and axle, as is usual in pipe boxes. B is a flange around the part A, against which the inner spoke-plate C bears. D is the main spoke-plate, which is bored, or an opening is made in it to allow it to slip on to the part A, as seen in Fig. 2, where it is securely held by the screw-nut E. The inner spoke-plate C is securely fastened to D by bolts, and confined between the two parts A and C, thereby forming mortises for the spokes of the recesses F in the plate C. G represents the bottom or base of the mortises, upon which the ends of the spokes rest. The inner plate C rests against the flange B, through which flange the fastening-bolts H pass, as seen in Fig. 2. The nut E is of such a size to cover the opening in D and lap out on to it so as to hold it firmly to the main body A of the hub.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with a two-part hub, A B E, of a two-part spoke-holder, C D F, having the annular bottom G, as described, to take the pressure of the spokes, and thereby relieve the hub from wear.

ISAAC E. BOWER.

Witnesses:
JNO. T. WIMBERLY,
CHARLES G. CAMPBELL.

B. S. BROWN.

Improvement in Wardrobe Clothes Driers.

No. 124,247 Patented March 5, 1872.

Fig. II.

Fig. III

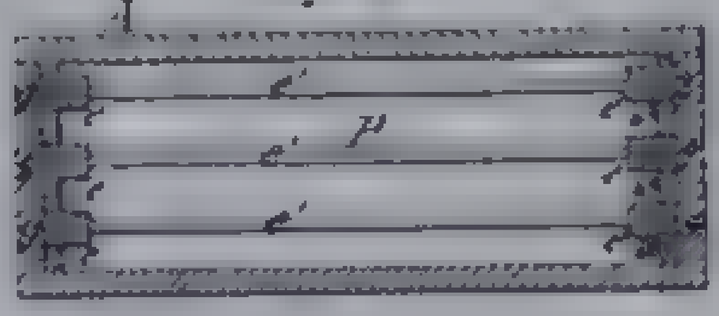


Fig. I.

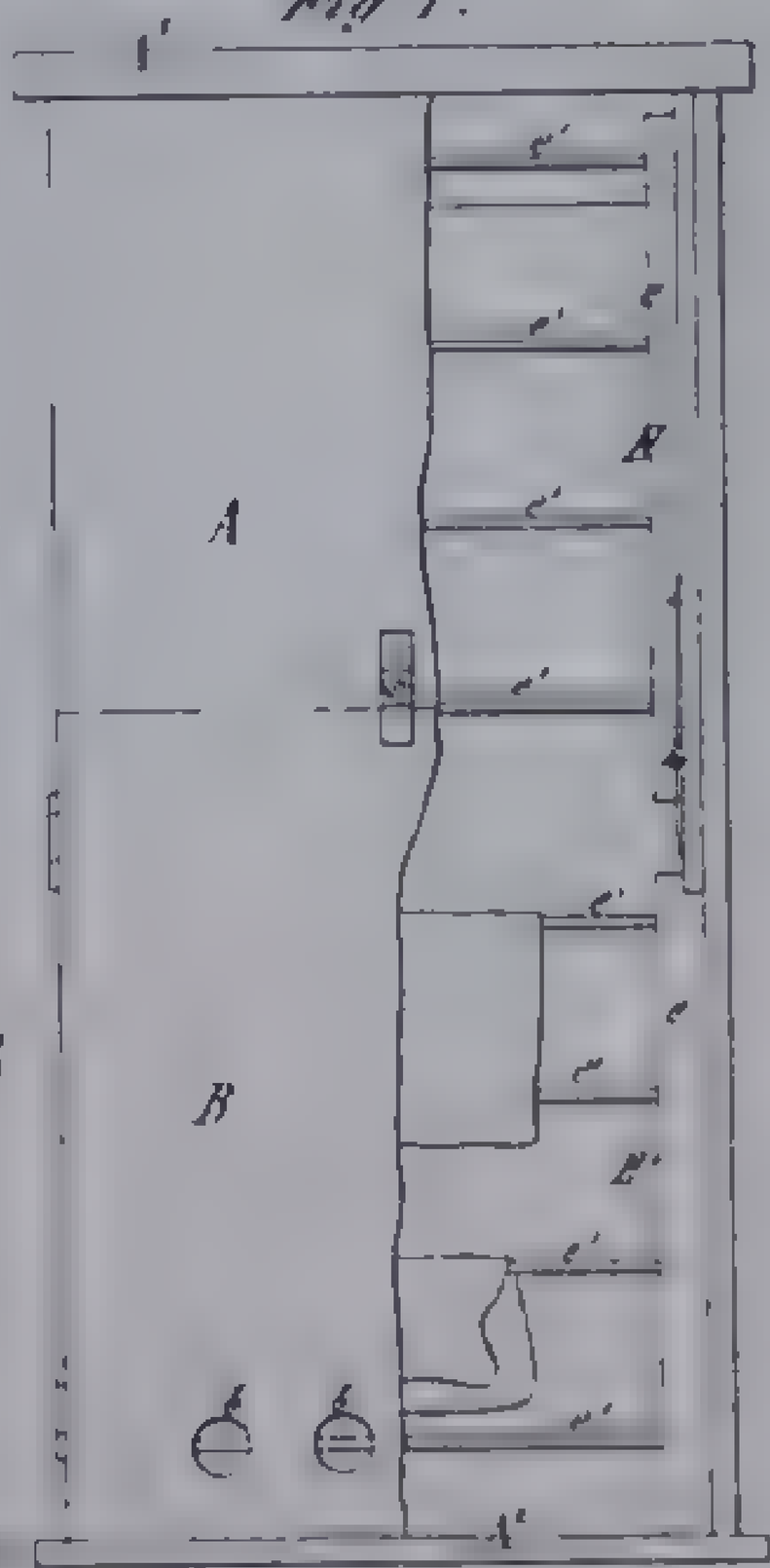
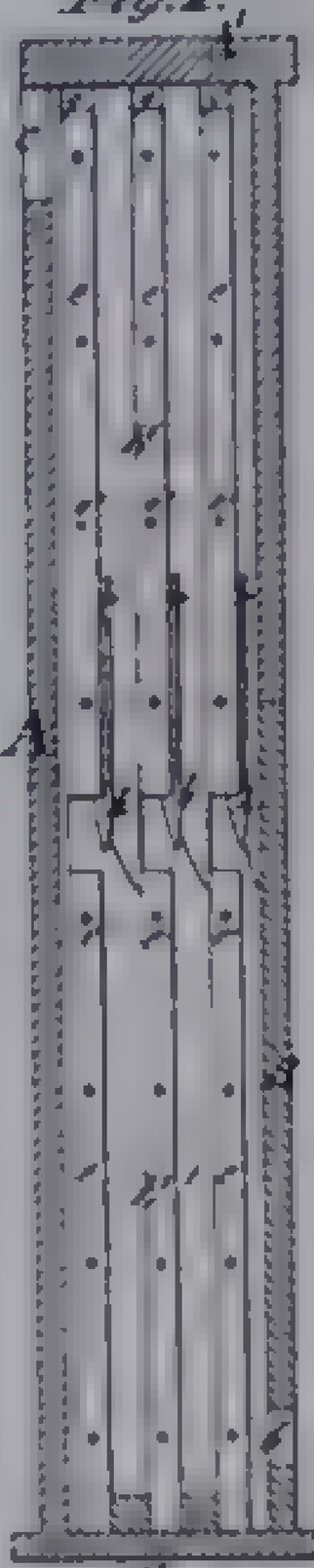


Fig. IV.



Witnesses
Edward Mitchell
Jno. J. Bonner

Inventor
B. S. Brown
by Dayton Hyatt
Atty

121,247

UNITED STATES PATENT OFFICE.

ELNON S. BROWN, OF NEW YORK, N. Y.

IMPROVEMENT IN WARDROBE CLOTHES-DRIERS.

Specification forming part of Letters Patent No. 121,247, dated March 5, 1872

SPECIFICATION

I, E. S. Brown, of the city of New York, in the county and State of New York, have invented a Wardrobe Clothes-Drier, of which the following is a specification:

My present improvements relate to an invention secured to me by Letters Patent of the United States No. 109,114. The former invention consisted of the arrangement in a vertical flue of an endless rack on which the clothes were arranged, and elevated and lowered by rotating the rack. My present apparatus is more especially designed for dwelling-houses occupied by several families, in which a clothes-drier is arranged on each floor, and is operated independent of the other driers in the house. My invention consists, first, in the combination, with a vertical main flue, preferably arranged in one of the walls of the building, of a case or wardrobe, provided with suitable racks for the reception of the clothes or other articles to be dried, and communicating with the main flue, so that a draught is created through said wardrobe, whereby the articles confined therein are dried; second, in the combination with the wardrobe of the series of removable clothes-racks, arranged one above the other, and supported in place in the wardrobe, hereinafter fully set forth.

In the accompanying drawing, Figure I is an elevation of my improved clothes-drier. Fig. II is a sectional elevation at right angles to Fig. I. Fig. III is a sectional plan view of the apparatus. Fig. IV is a sectional elevation of a portion of a building provided with my improved apparatus.

Like letters designate like parts in each of the figures.

A represents the body of the closed upright box or case, A¹ the top, and A² the bottom thereof. B is the door forming the lower portion of the front of the case A; the upper portion of the latter, which is out of convenient reach, may be fixed or stationary, as shown in the drawing. The case or box A reaches from the floor to the ceiling, or nearly so, and resembles in appearance an ordinary wardrobe. Into the openings formed in the lower portion of the door B for the admission of the air, and in the opening in the back of the case A near its top for the escape of the damp air, E E¹ represents two series of racks or frames, consisting of two side pieces, *e e*, and cross-bars *f*, on which the clothing to be dried is placed. The racks E are arranged in the upper half of the case A and slide in vertical ways *g*. They are secured in place by spring-catches *h*, constructed with inclined heads, so that they will automatically engage with the racks E as they are slid upward in place in the ways *g*. These racks are disengaged in an obvious manner by withdrawing the catches *h*. The racks E¹ extend from the bottom of the casing A, on which they rest, to the middle thereof, and are kept apart by blocks *f*. The racks E are first filled with clothes and introduced into the wardrobe A, and secured in place, when the racks E¹ are filled with clothes and placed in the wardrobe, which operations can be easily performed. H, in Fig. IV, represents a vertical flue arranged in one of the walls of the building, and extending from the bottom to the top thereof. I I are horizontal flues or pipes preferably provided with dampers *i*, connecting each of the several clothes-driers with the main flue H.

The racks with the clothes arranged thereon being placed in the wardrobe A the door B is closed and the damper *i* opened, whereby a strong draught through the wardrobe is created, which quickly dries the clothes contained therein. This draught through the wardrobe also serves to ventilate the apartment in which the wardrobe is placed. After the clothes are dried and ironed they can be replaced in the wardrobe, which is thus made to serve a double purpose.

I claim as my invention—

1. The combination with the main flue H, of the case or wardrobe A, communicating with the former, and provided with suitable racks for the reception of the clothes, substantially as and for the purpose hereinbefore set forth.

2. The combination with the wardrobe A, of the series of racks E E¹, arranged substantially as and for the purpose hereinbefore set forth.

E. S. BROWN.

Witnesses:
JAY HYATT,
JNO. J. BONNER.

4 Sheets--Sheet 1.

JOHN D. BRUNTON.

Machine for Dressing Stone.

No. 125,263. Patented April 2, 1872.

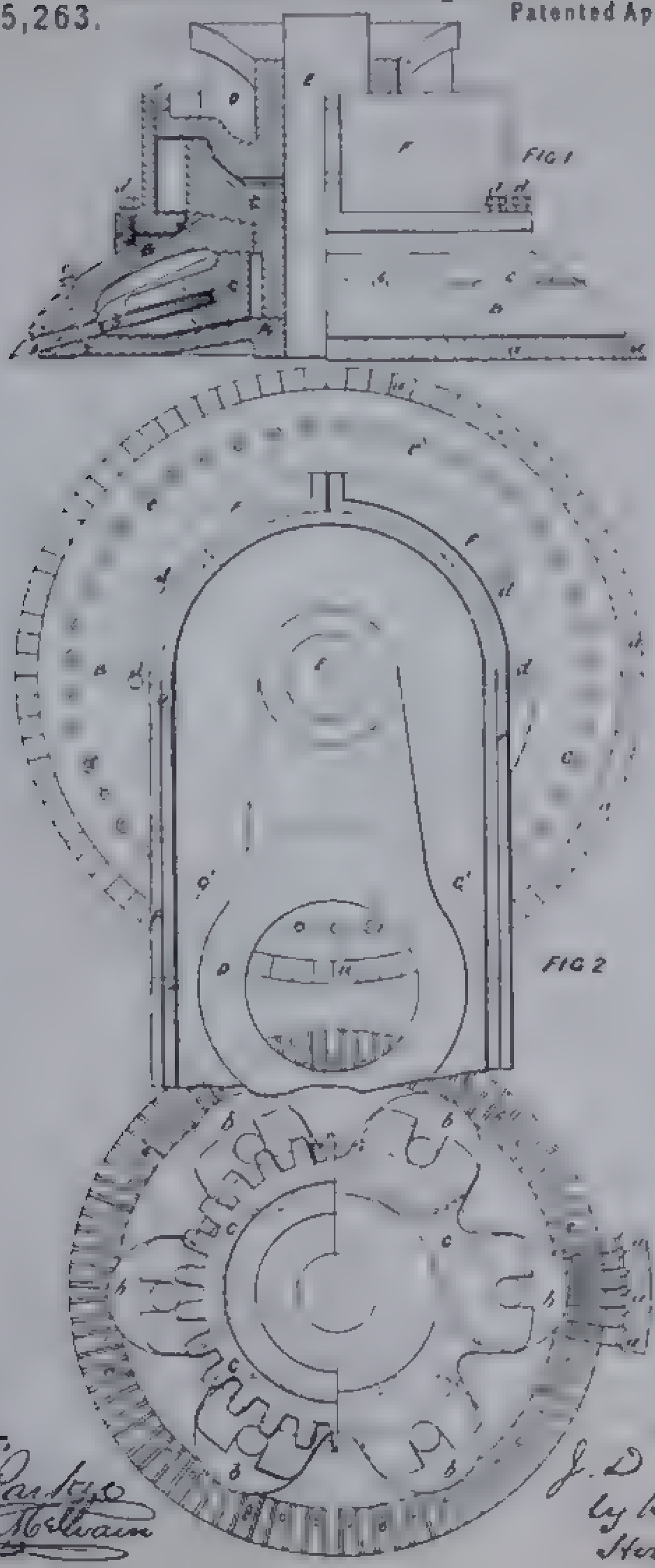


FIG 1

FIG 2

Witnesses,
Jthos. Purdy
Thos. Mellvain

Inventor
J. D. Brunton
by his Attys
Hewson and Dewey

125,203

UNITED STATES PATENT OFFICE.

JOHN DICKINSON BRUNTON, OF LEIGHTON CRESCENT, KENTISH TOWN, ENGLAND.

IMPROVEMENT IN MACHINES FOR DRESSING STONE.

Specification forming part of Letters Patent No. 125,203, dated April 2, 1872.

SPECIFICATION.

I, JOHN DICKINSON BRUNTON, of Leighton Crescent, Kentish Town, in the county of Middlesex, England, civil engineer, have invented Improvements in Machinery Applicable to Tunneling, Shaft Sinking, and Stone Dressing, of which the following is a specification:

This invention relates to certain improvements applicable to machinery or apparatus for tunneling, shaft-sinking, and stone-dressing, and consists as follows: I substitute for the revolving disks, or for the sectors having beveled cutting edges, described in the specifications of my former patent for the United States, No. 80,056, and dated 21st July, 1868, and also in the specification of a further patent for the United States, applied for contemporaneously herewith, a row or rows of cutting tools of a chisel form, and I act upon these chisels by rollers or rotating disks, so as to cause them to chip pieces off the rock or stone. The chisels may be so placed or arranged side by side in a row or rows as that their edges shall form a circle either concave or convex, or so that their edges shall form a straight line, or any other figure that may be desired. The actuating rollers are to be fixed in the rim of a wheel suitably formed to receive them on a reciprocating bar, or they may be attached to the links of a chain, as may be found most suitable for the particular work required. In all cases each roller, as it fulfills its prescribed path, actuates each chisel, the several chisels being set in a firm and rigid holder.

Figure 1, Sheet No. 1, is an elevation, partly in section, of the cutter-holder and operating devices for actuating the cutters; Fig. 2, a plan view. Fig. 3, Sheet No. 2, is a transverse elevation, partly in section, of a stone-dressing machine with my improvements; Fig. 4, Sheet No. 3, a plan view, partly in section, of Fig. 3; Figs. 5, 6, 7, and 8, Sheet No. 4, detached views of parts of the machine.

a a a are the chisels, the edges of which form a circle in this case, though they may form a straight line or any other figure. *b b* are the rollers or rotating disks, which act upon the chisels *a a*, causing them to chip off the rock against which they act. A B are separate castings, bolted together by the bolts *c c c*, so as to constitute a holder for the chisels. This holder does not revolve with the chuck C, but is held by the pins *d d* while the machine is working. It can, nevertheless, be moved round and set at different points, several holes being provided at the back of the casting B, into which the pins *d* will enter. D is the cross-head, as described in the specification of my British patent No. 1,784, A. D. 1866; and E E are the pivots or arbors on which revolve freely the chucks C, which are driven by means of teeth cast on their peripheries, and forming one piece with the chuck C, as shown in section at Fig. 1, and half in elevation at Fig. 2. F is a casting, made in two parts, surrounding the cross-head, and bolted securely to the flange *e* cast upon the cross-head, in which casting are the pins *d d*, before described. This casing incloses the two wheels of the chucks C and the central wheel C′, (as described in my specification No. 1,784, A. D. 1866,) which drives them both. As the cross-head moves slowly round the chisels *a* slide inward by their contact with the stone or other surface acted upon, and are constantly forced outward again by the rollers *b* as they pass over or behind them. I prefer to form the chisels of wrought-iron, having steel points welded on, as is common in ordinary tools used for boring in rocks. In order to prevent the grit getting into the interior of the holder, I surround the neck of each chisel with a band of India rubber or other suitable substance, as shown at *f* in Fig. 1, which, by stretching, can adapt itself to the movements of the chisel in the holder. When applying chisels actuated by rollers to stone-dressing machinery, I make the chisels *a a a* either straight, as shown in Figs. 1, 2, and 5, or curved, as shown in Figs. 3, 6, 7, and 8. Whether straight or curved, the chisels are actuated by rollers, which cause them to chip off the stone in front of their edges. A, Figs. 3 and 4, is the bed of a stone dressing machine, provided with rollers *g g*, on which rests and moves the table B, carrying the stone to be operated upon. The table B is caused to traverse, by a screw, B′, in the manner well known in planing-machines. C C are standards, within the faces of which slides the frame D. In the center of this frame is the shaft or pivot *h*, around which revolves the wheel or chuck E, which carries the rollers *b*. The frame D is raised or lowered by screws D in the stand

W. O. BUCHANAN.

Improvement in Apparatus for Towing Canal Boats.

No. 124,326. Patented March 5, 1872.

FIG 1

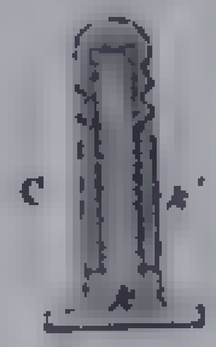


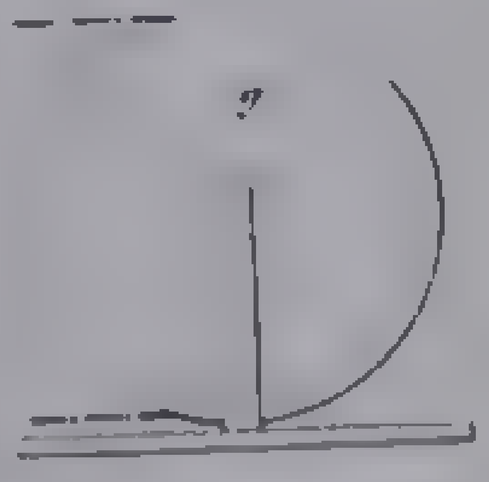
FIG 6

FIG 5

FIG 4

FIG 2

FIG 3



Inventor

W. O. Buchanan

Witnesses

Charles Hoffe

Thomas G. Thompson

121,320

UNITED STATES PATENT OFFICE.

WILLIAM OLIVER BUCHANAN, OF MONTREAL, CANADA.

IMPROVEMENT IN APPARATUS FOR TOWING CANAL-BOATS.

Specification forming part of Letters Patent No. 121,320, dated March 5, 1872

SPECIFICATION.

To all whom it may concern:

Be it known that I, WILLIAM OLIVER BUCHANAN, of the city of Montreal, in the district of Montreal, in the Province of Quebec, Canada, civil engineer, have invented new and useful "Improvements on the Art of Towing Vessels and Apparatus used therefor;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, where—

Figure 1 represents a general plan of canal and outline of the application of my invention. Fig. 2 represents an elevation of terminal drum, first modification. Fig. 3 represents an elevation of terminal drum, second modification. Fig. 4 represents a plan and elevation of main line bearing post, first modification. Fig. 5 represents a plan and elevation of main line bearing-post, second modification. Fig. 6 represents a plan and elevation of main-line bearing post, third modification.

This invention has reference to an art of towing vessels on canals and other inland waters, to obviate the attrition and consequent destruction of their sides or banks by the agitation of the water by steamers, and to supersede the slow and expensive operation of towing by horses.

My invention consists in placing along each bank of the canal an endless rope, made of iron or steel wire, or other suitable material, moving around a pulley or drum placed at each end of such section to be worked; the said rope to rest upon and pass over small intermediate pulleys or sheaves of iron placed on posts of wood or iron firmly fixed in the earth at suitable distances; these pulleys to revolve freely on their axis with the movement of the rope, lying in and passing over them. They may require to work on a hinge, so as in some degree to conform to the more direct line of draft. Motion is given to said rope by stationary power of steam, water, &c., placed at the ends of each section, and moving at a suitable speed. There will be at regular distances short pieces of smaller rope inserted or spliced into the main rope, of suitable lengths, having a flexible eye at the end; to this the tow-line of the boat may be attached or detached at pleasure. These loops or short pieces will pass freely over and around the various pulleys or sheaves at each support, as well as over the terminal pulleys or drum of each section.

In passing round curves the posts will be more frequent and placed at points to conform to the shape of the curve. For convex curves these posts will be of cast-iron, cast in two pieces, the inner one firmly fixed in the ground or on blocks of stone set in the earth. The outer piece or shell revolves on the inner one. There will be corrugations on the outside surface to receive and hold the rope pressing against it in passing the curve. For passing concave curves there will also be a cast-iron post placed at such distances as will conform with the shape of the curve. These posts will also be cast in two pieces; the cap or top portion will revolve on a pivot, fitting into a socket formed by the bottom portion of the post. There will be a groove in the revolving cap to receive the moving rope pressing against it on the outside of the post, their height being regulated so as to enable the tow-line to free itself in passing by slipping over the rounded top or cap as it revolves. A piece of iron may be attached over the top of the post, arranged so as to facilitate the tow-line freeing itself.

The supports used on straight portions of the canal may be of wood firmly fixed in the earth, with braces set longitudinally with the canal, and placed so as to interfere as little as possible with the ordinary traffic of the canal by horses. Suitable stationary power must be provided at each terminal, moving the pulleys or drums giving motion to the endless rope.

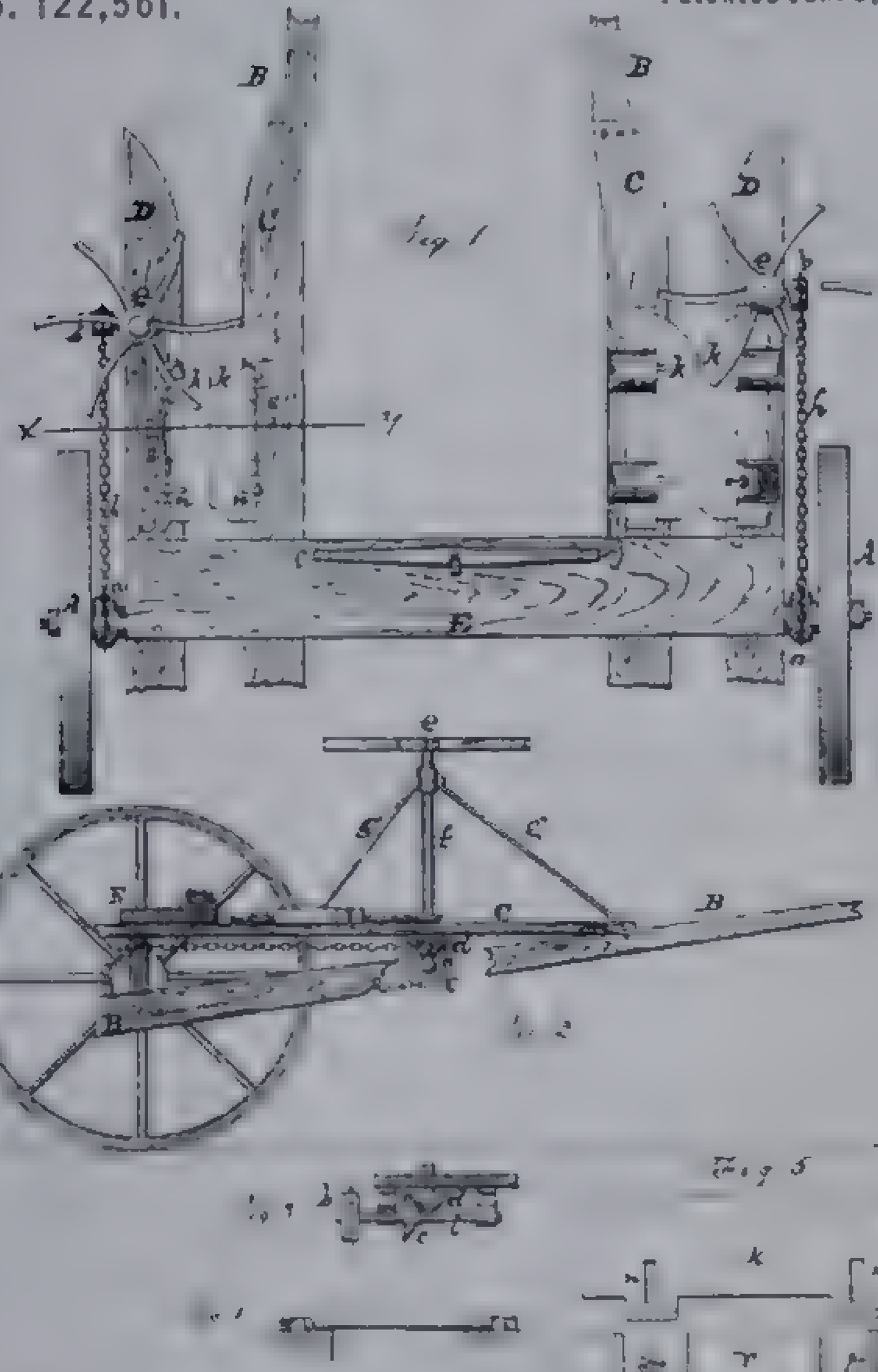
The tow-lines of the boats using this system must be provided with a hook at the end, which can be placed in the loops as they pass along up and down on either side of the canal. On starting a boat from a state of rest, provision must be made on the boat to pay out the tow line gradually till the boat gets under headway, and which then may be hauled in to the necessary length.

A man must accompany each boat to attend to the attaching and detaching of the

John Burke

Grain Harvester

No. 122,561. Patented Jan. 9, 1872.



Witnesses:

W. C. Dodge

W. C. Bond

John Burke
By Dodge & Bond
His Attys

122,561

UNITED STATES PATENT OFFICE.

JOHN BURKE, OF SYCAMORE, ILLINOIS.

IMPROVEMENT IN CORN-HARVESTERS.

Specification forming part of Letters Patent No. 122,561, dated January 9, 1872.

SPECIFICATION.

I, JOHN BURKE, of Sycamore, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Corn Harvesters, of which the following is a full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view; Fig. 2, a longitudinal vertical section; Fig. 3, a detail, showing the gearing which drives the reel; Fig. 4, a section on line *x y* of Fig. 1; Fig. 5, an enlarged view of one knife, also showing a second mode of arranging springs behind it.

My invention consists in constructing a corn harvester with knives arranged so as to cut the stalks by simply pressing on opposite sides thereof as the machine is drawn along, as hereinafter explained.

In the drawing, A represents the wheels, about two and a half feet in diameter, as shown, which run on an ordinary axle. B are the shafts, the rear ends of which are secured to the under side of the axle at such an angle as may be required to bring their forward ends in the proper position. C D are bars, the rear ends of which are bolted to the top of the axle. The front ends of the two bars C are secured to the shafts B, while the bars D may be braced from the axle by rods secured suitably. The front ends of both C and D are curved, (see Fig. 1,) and serve the purpose of gathering the standing corn and directing it to the knives. *e* is a reel upon the top of the upright shaft *f*, and about eighteen inches above the bars D, which supports the stalks above the knives. The reel is driven by a chain, *h*, which runs over a ratchet wheel, *a*, on the hub of the wheel A, and over another ratchet wheel, *b*, upon the end of a short shaft, *i*, supported in bearings beneath D, on which short shaft *i* is a bevel gear-wheel which drives the bevel gear-wheel *d* upon the lower end of *f*. (See Fig. 3.) The shaft *f* is supported in the usual manner, and may be braced with rods *g*. The knives I are about eighteen inches long, about three eighths of an inch thick at the back. Their form is shown in the drawing. They are not rigidly secured to the machine, but each is provided with two slots, *s*, one near each end of the knife. The knives rest on the bars C D, and bolts with large heads pass through the slots *s* and are secured to the bars C D in such a position that the knives can move laterally, and the slots are to be of such width relatively to the bolts that the knives may have such lateral movement at either end alone, or may move away from each other at one end, and, at the same time, approach each other at the other end. The knives are so arranged that their edges overlap each other a little, and are held together by a spring, *s*, back of each knife, as shown on the left side of Fig. 1; and the back of the knives may have lips to furnish broad bearings for the ends of the springs to rest against. The springs may be secured to the bars and made adjustable in any suitable manner. E is a board or plank, above and bolted to the bars C D. If desired, an apron or platform may be hinged behind the machine to the bars C D or plank E to receive the cut stalks, and the platform may be so constructed that the operator can let the rear fall to the ground at suitable intervals to discharge the cut stalks upon the ground.

The machine is to be drawn by a single horse. The distance between the two sets of knives must correspond with the distance between two rows of corn, two rows being cut at the same time.

In operation the stalks are gathered and brought to the knives by the bars C D and reel *e*; and as the stalks pass in between the knives they will be forced apart somewhat at their front ends, while the stalks will be forced along, or rather they will be held upright, while the knives will be drawn forward and the stalks will be uniformly severed, and clogging will be prevented.

Another method of placing springs behind the knives is shown on the right of Fig. 1 and in Fig. 5. In this case the slots and bolts are used as before. Cut over the back part of the knife, and partly let into the wood, is a casting, the plate part *r* of which forms a guide for the knife, while the parts *t* form boxes, within which are spiral springs, taking the place of the springs *s* before mentioned, one of which boxes is shown open.

Knives having any suitable kind of an edge may be used. Guards may be placed upon the machine to prevent the cut stalks from falling upon the wheels.

3 Sheets--Sheet 1.

HENRY CARTER.

Improvement in Ditching Machines.

No. 125,167. Patented April 2, 1872.

Fig. 1.

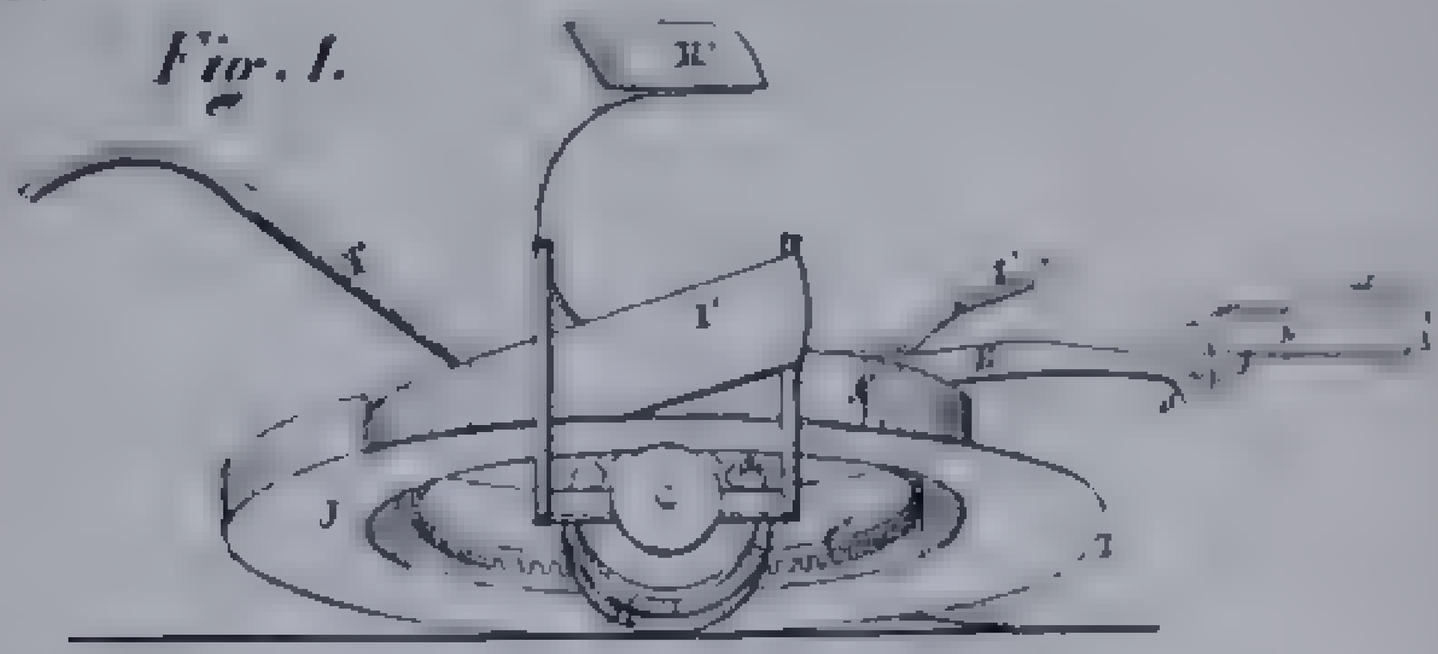


Fig. 2.

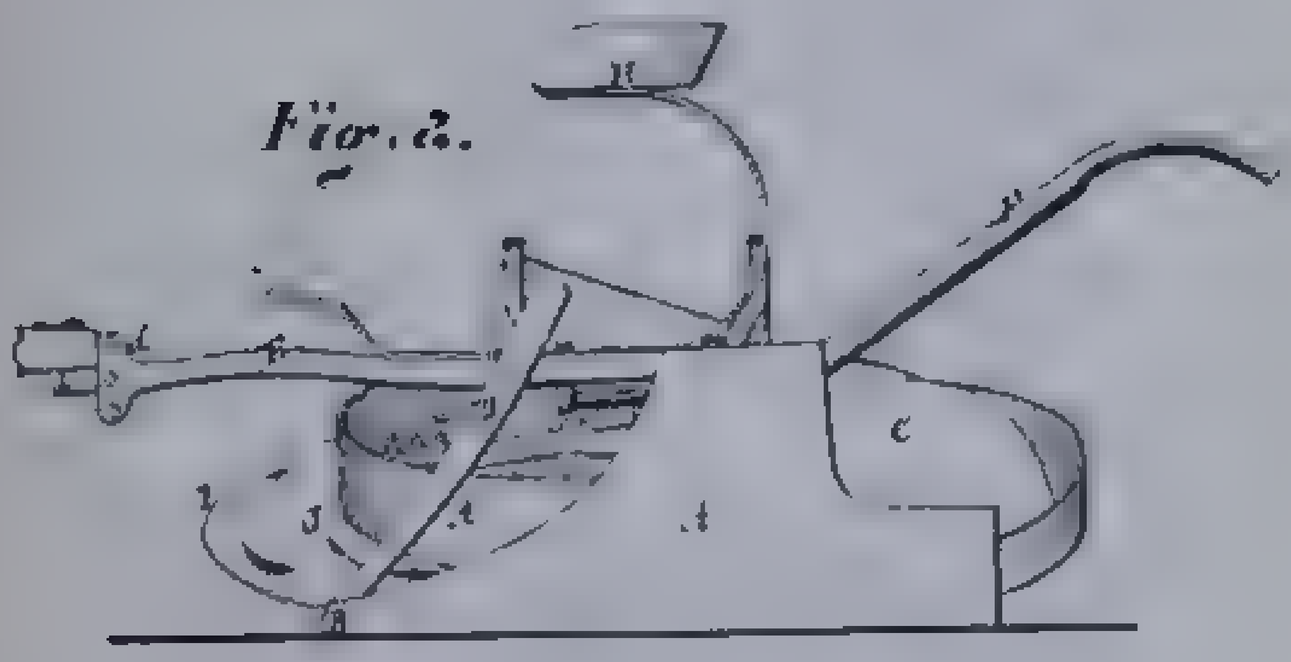
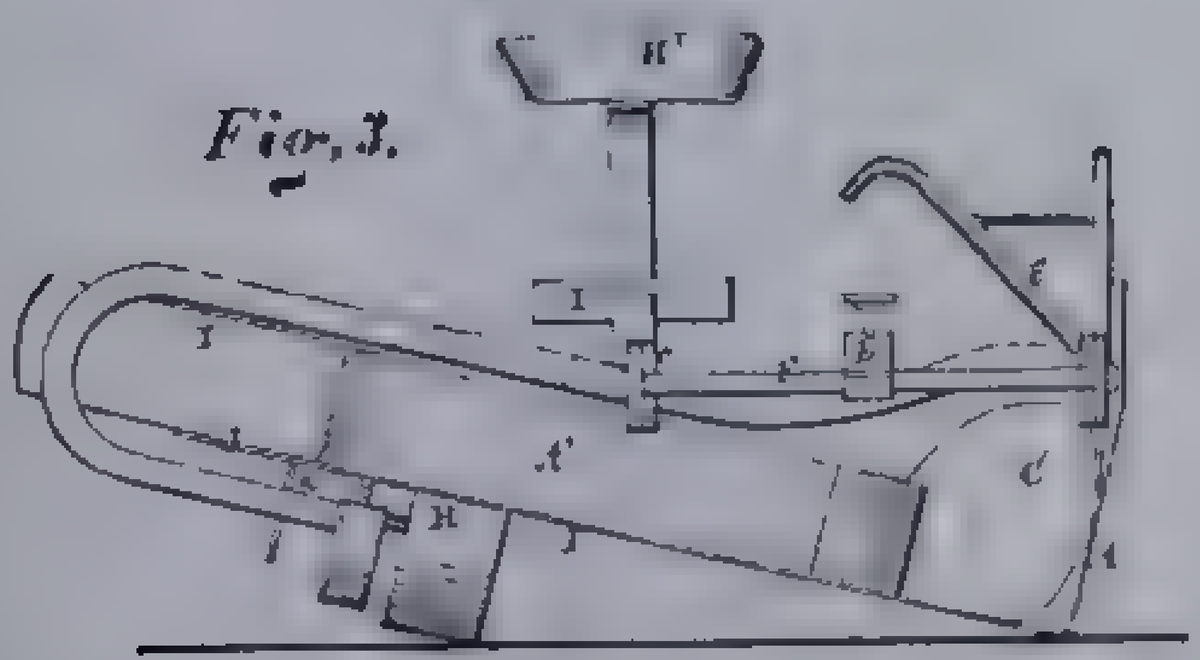


Fig. 3.



Witnesses.
J. H. Burridge
D. L. Humphrey.

Inventor.
Henry Carter.
By Burridge & Co.
Att'ys Cleveland Ohio

125,167

UNITED STATES PATENT OFFICE.

HENRY CARTER, OF AYLMER, CANADA.

IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. 125,167, dated April 2, 1872.

To all whom it may concern:

Be it known that I, HENRY CARTER, of Aylmer, in the county of Elgin, Province of Ontario, and Dominion of Canada, have invented a certain new and Improved Machine for Subsoiling, Ditching, &c.; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawing making part of the same.

SPECIFICATION.

Figure 1 is a side view of the machine. Fig. 2 is a view of the opposite side of Fig. 1. Fig. 3 is a front view. Fig. 4 is a view of the rear end. Fig. 5 is a plan view. Fig. 6 is a view of the under side.

Like letters of reference refer to like parts in the several views.

The purpose of this invention is to cut trenches in which to lay tile for drainage; and which invention consists of a plow having attached thereto a revolving elevator, whereby the loose dirt thrown up by the plow is conveyed out of the trench and deposited along the side thereof.

Of said invention the following is a more full and complete description.

In the drawing, Fig. 2, A represents the plow, (the land side thereof;) B, the point; C, the mold-board; D, the colter; E, the beam; F, the handles; all of which are firmly connected to one end of the iron frame G, Fig. 4, extending across the top of the machine, and curving downward and under thereof, as shown in said Fig. 4. To the extreme of the curved end of said frame is attached a wheel, H, Figs. 3 and 4, upon which the outer side of the machine is supported and carried. From the center of the frame is hung an elevator, I, consisting of a broad circular ring, J, Figs. 2 and 5, provided on its inner edge with a deep flange, A′, inclosing the arms B′ attached thereto, and whereby the elevator is suspended from the frame. Within the compass of the flange A′, and to the arms B′, is secured a toothed wheel, C′, Fig. 6, which is made to engage a pinion, *a*, Fig. 1, secured to the shaft of the wheel H, whereby it is operated, as and for a purpose presently shown. It will be observed that the outer edge of the ring J of the elevator fits closely into the mold-board side of the plow, the two being respectively curved for their mutual adaptation, as shown in Fig. 3, and that from the end of the mold-board proceeds a guard, D′, Fig. 4, which reaches around nearly to the frame, the use of which will hereinafter be shown. F′, Fig. 1, is the pole to which the team is geared for drawing the machine. Said pole is attached to the machine by a cross-piece, F″, having a slot, *b*, therein, in which the end of the pole may be adjusted either way from the middle, as the draft of the machine may require. The cross-piece F″ is connected to the arms G′ by ears *c*, Fig. 3, having holes therein, whereby it is bolted to the ears *d* of the arms, having corresponding holes for the admission of the bolt *f*, by which means the cross-piece and pole can be adjusted vertically, as the working of the machine may demand.

The practical operation of the above-described machine is as follows: The machine is placed on the ground in the position shown in Fig. 3, with the plow A on the line in which the trench is to be cut. The driver takes his place on the seat H′, resting his feet on the step I′. As the machine moves forward the plow turns up the dirt and throws it upon the elevator I, which, on being made to rotate by the wheel and pinion H *a*, it is thereby carried up in direction of the arrows, Fig. 5, and thrown off upon the ground along the side of the trench. The guard D′ prevents the dirt from falling off in the rear of the machine, and the flange A′ restrains it from falling into the machine, whereas the guard F′, Fig. 3, prevents it from being conveyed around down to the plow.

The first cut or furrow having been made, a second one is then turned in like manner by the plow going through the furrow again, and so on until the required depth of the trench is obtained.

In consequence of the inclined position of the machine the trench cut will be of a V-shape, so that the tile when laid therein will have firm and solid walls of dirt against which to lie, and which can be laid without special care being taken to have them in line, as each piece of tile will assume a straight direction in consequence of the angle of the trench.

The above-described machine, though intended for trenching for tiles, is well adapted for

J. M. COMPANT & E. KRAUSKOPF.

Improvement in Throttle Valve and Stem.

No. 125,174. Patented April 2, 1872.

Fig. 1.

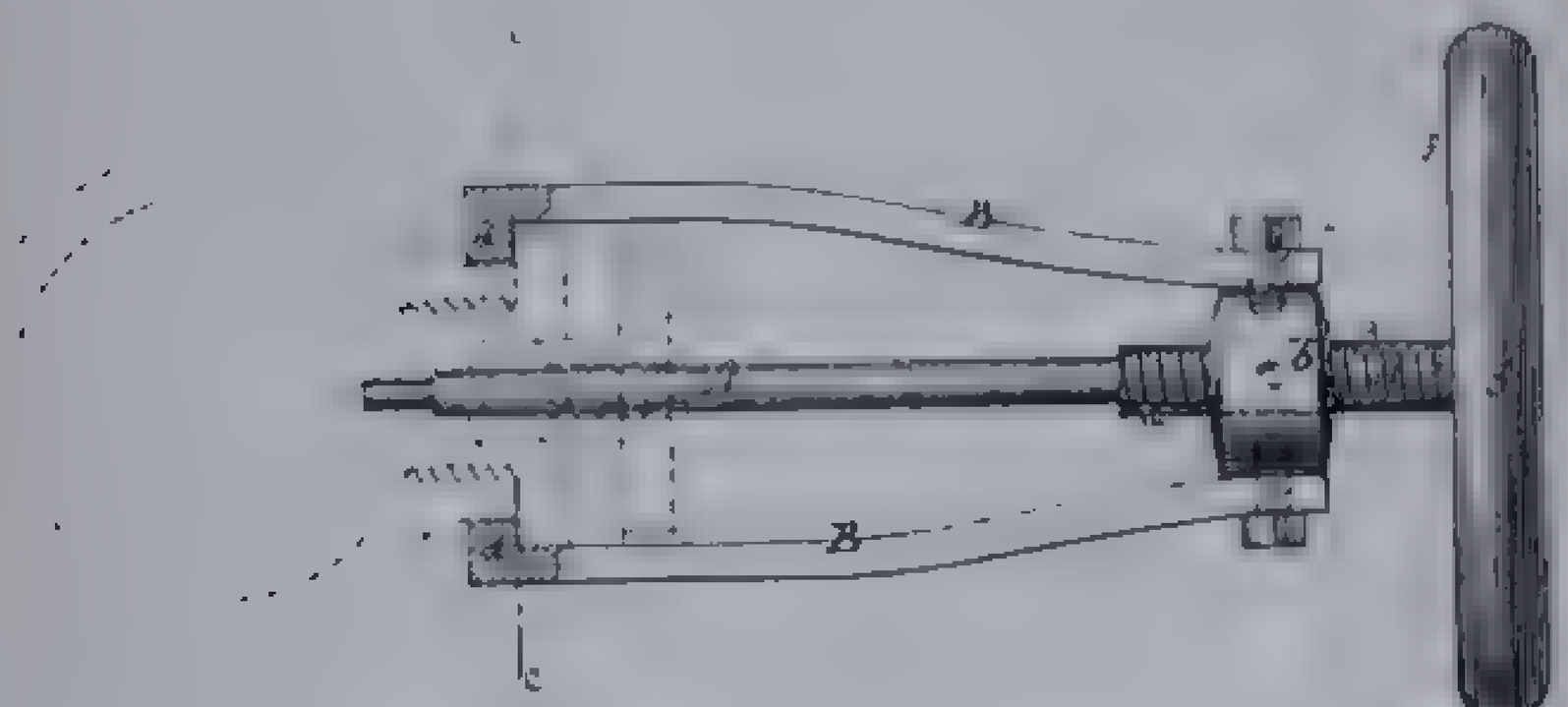
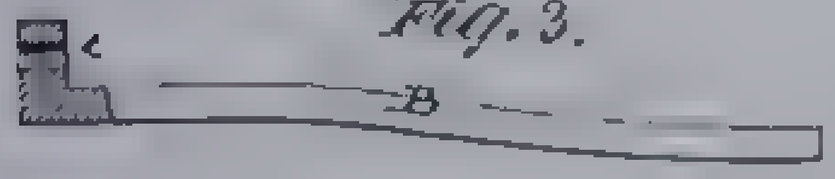


Fig. 2.

Fig. 3.



Witnesses:
Allen Becker.
A. Gustave Dittmar

Inventor:
J. M. Compant
E. Krauskopf
Per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE

JOHN M. COMPANT AND ENGELBERT KRAUSKOPF, OF FREDERICKSBURG, TEXAS.

IMPROVEMENT IN THROTTLE-VALVE STANDS AND STEMS.

Specification forming part of Letters Patent No. 125,174, dated April 2, 1872.

To all whom it may concern:

Be it known that we, JOHN M. COMPANT and ENGELBERT KRAUSKOPF, of Fredericksburg, in the county of Gillespie and State of Texas, have invented a new and Improved Throttle-Valve Stand and Stem; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of our invention. Fig. 2 is a transverse section of the same on the line *c c*, Fig. 1. Fig. 3 is a detail side view of the braces, of a modified construction.

Similar letters of reference indicate corresponding parts.

This invention relates to a new arrangement of support for the stem of a throttle valve, and has for its object to facilitate the lubricating of the screw and cause the parts to be firmly held in place. The invention consists in forming a screw on the outer end of the stem and fitting it into a nut that is, by braces, held to the stand.

A in the drawing represents the stem of the valve. Near its outer end it has formed on it a screw, *a*, which works in a nut, *b*. Braces B B, attached to the throttle stand by means of a ring, *d*, as in Fig. 1, or by screws fitted through projecting ears *e* at the ends of the braces, as in Fig. 3, serve to hold the nut *b*. The valve is attached to the inner end of the stem in the ordinary manner. The outer end of the stem carries a hand wheel, *f*. By the outer nut and inner bearing the stem is securely held at both ends.

The screw can be conveniently lubricated, so that it will not grind in the nut, nor wear out in a short time, like the screws of ordinary throttle-stems.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The arrangement of the stem A of a throttle valve, threaded at *a*, and provided with a nut, *b*, held in position by braces B and set screws C, as and for the purpose described.

JOHN M. COMPANT.
ENGELBERT KRAUSKOPF.

Witnesses:
ADOLF WEISS,
OTTO MARSCHALL.

C. B. COTTRELL.

Improvement in Piston Packing for Printing Presses.

No. 125,177. Patented April 2, 1872.

Fig 1

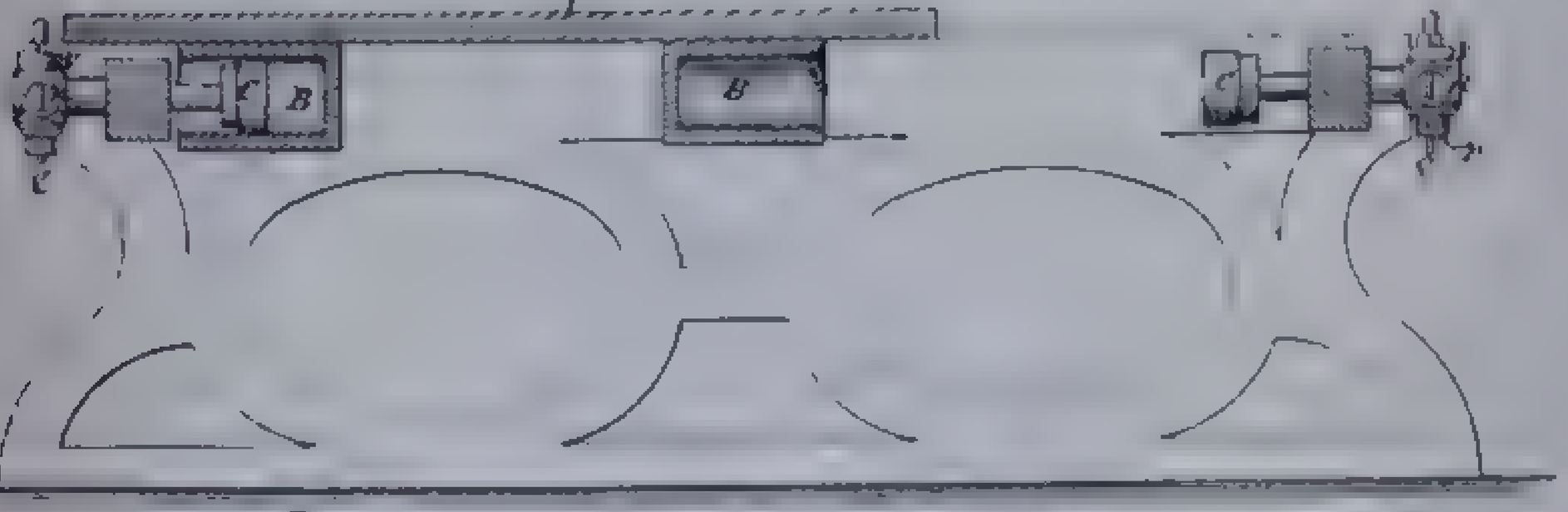


Fig 4.

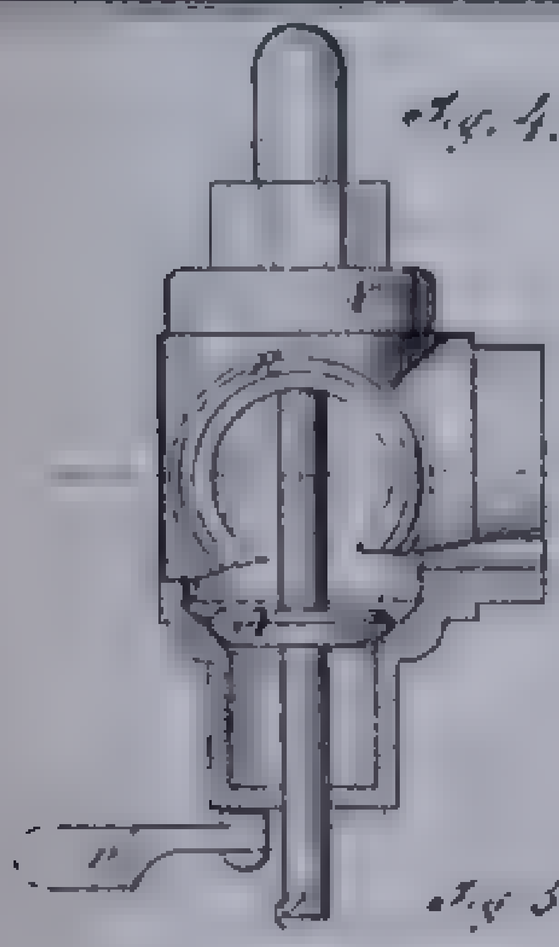


Fig 2

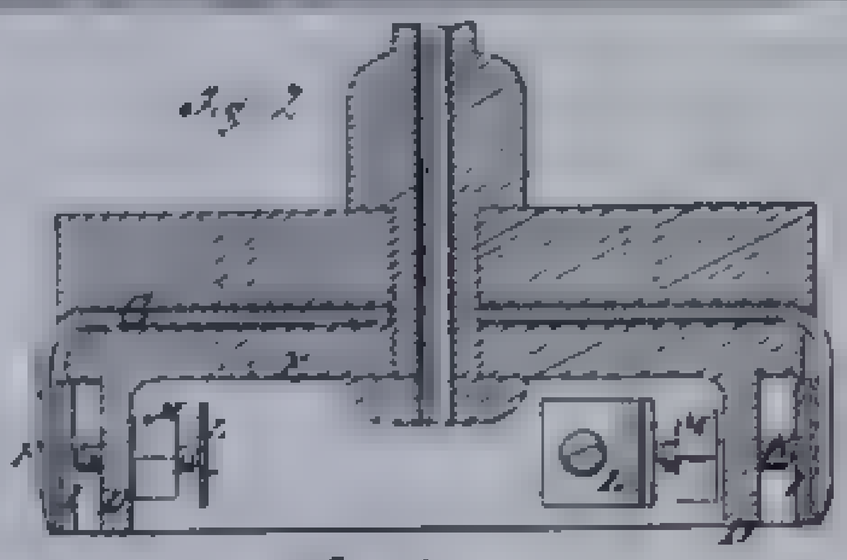


Fig 5

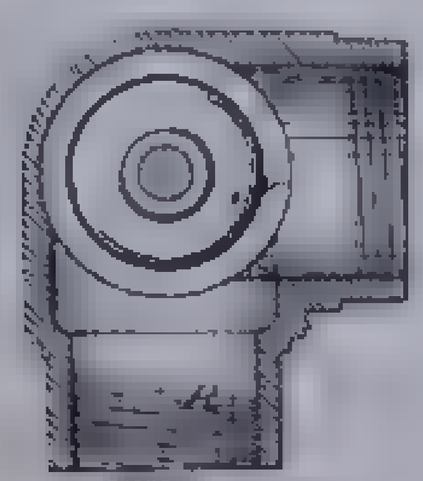
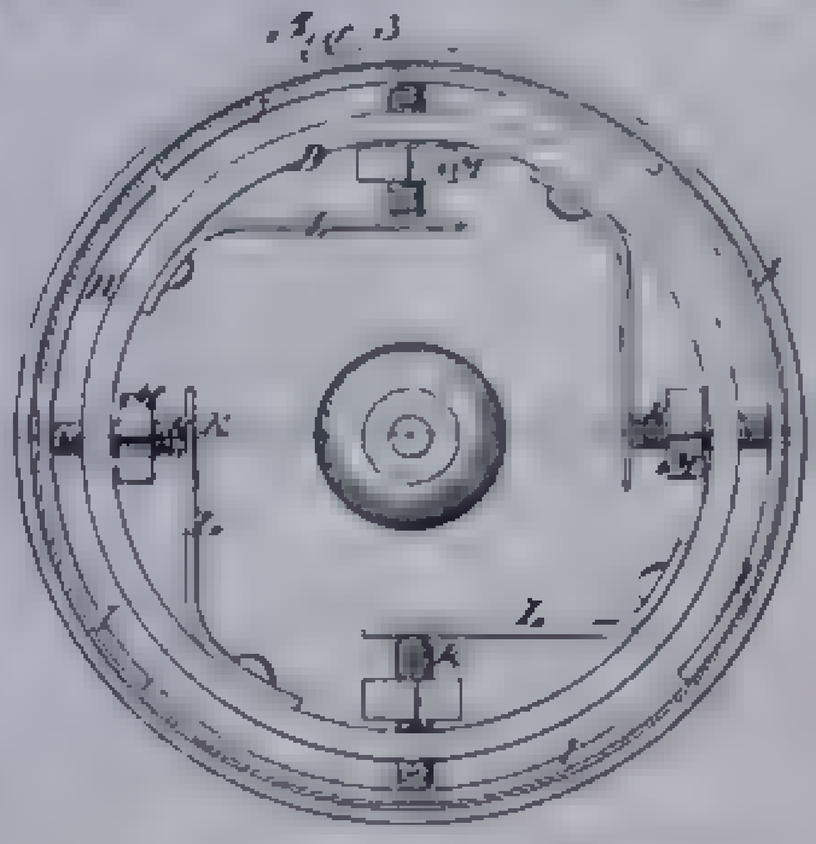


Fig 3



Witnesses:

Chas. Neave

Geo W. Mabie

Inventor:

C. B. Cottrell

Per Munn & Co

Attorneys.

123,177

UNITED STATES PATENT OFFICE.

CALVERT B. COTTRELL, OF WESTERLY, RHODE ISLAND.

IMPROVEMENT IN PISTON-PACKINGS FOR PRINTING-PRESSES.

Specification forming part of Letters Patent No. 123,177, dated April 2, 1872

Specification describing a new and Improved Air-Spring Mechanism for Printing Presses, invented by CALVERT B. COTTRELL, of Westerly, in the county of Providence and State of Rhode Island.

My invention consists, first, in the peculiar construction, hereinafter described, of elastic piston-packing for said air-spring mechanism; and, second, in the relative arrangement of the vacuum-valves with the said air-spring mechanism.

Figure 1 is a longitudinal sectional elevation of a part of a printing press with an air-spring mechanism arranged according to my improvement. Fig. 2 is a transverse section of the piston on the line *x x*, Fig. 3. Fig. 3 is a front elevation of the piston. Fig. 4 is partly a side elevation and partly a vertical section of the vacuum-valve mechanism; and Fig. 5 is a horizontal section of Fig. 4 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is the reciprocating bed or table of the printing press, which it is desirable to arrest by the action of an air-spring at each movement, and for which the cylinders B on the table and the pistons C on the frame are provided. For packing these pistons with an elastic rim that will be capable of yielding to such an extent that a wad of paper, or the thick tapes used for carrying the papers, or any similar object falling on the piston or cylinder, as often happens, so as to be wedged in the cylinder between it and the piston, will not break or burst the cylinder, nor to any material extent interfere with the operation of the machine; also to have the said rims so that they will not expand when wholly out of the cylinder, as they are at each movement of the table, so as to interfere with entering again; I propose, in the present case, to have a strong flange, D, or its equivalent, somewhat less in diameter than the disk E, attached to the front side of said disk, between which flange and the side F of the cup-shaped leather packing G is an annular space, H, in which I propose to arrange four, more or less, segments, I, to be held against the inner side of the packing F for pressing it outward by the pins K, sliding through said flange and pressed outward by the springs L, but limited in their outward movement by the nuts M, which screw forward and back on said pins to change the limit of their outward movement, as required, and when becoming worn after pressing the packing F out far enough to pack properly with the cylinder, and are thus prevented from expanding it, so as to interfere with the entering of the piston in the cylinder. The springs L are capable of bending inward to a considerable extent, so as to leave the packing, as above stated. I also propose, in the present case, to attach the vacuum-valve N, used with these air-spring mechanisms, to allow air to flow in behind the piston when withdrawing from the cylinder to compensate for that lost by leakage past the piston on the end of the piston, and preferably outside of the cross-beam of the frame instead of placing it on the piston, as heretofore, and to make the piston rod O hollow for the air to flow through it when the valve rises. The attachment to the rod is made by screwing the valve case on the end of the piston-rod. By this plan I am enabled to arrange it to work vertically with a very simple construction, and I have better access to it for fastening it open to prevent the compression of the air, as it is frequently required to do to allow of turning the machine by hand for cleaning, repairing, &c.; and for so fastening the valve open, I provide a button, P, to be turned under the stem and hold it open after being lifted up. And in connection with the valve case arranged in this manner, I propose to apply a pipe-connection, R, above the valve, so as to connect the compression space in the cylinder with a governor, sometimes used for regulating the pressure for different speeds, as in my patent October, 17, 1871.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. The combination of the segmental rim I, dividing pins K, adjusting nuts M, flange D, and springs L, with the flexible packing rim F, substantially as specified.

2. The arrangement of the vacuum-valve upon the hollow piston rod O of the air-spring mechanism, substantially as specified.

CALVERT B. COTTRELL.

Witnesses:
T. B. MOSHER,
GEO. W. MABEE.

2 Sheets--Sheet 1.

JOSEPH DALTON.

Improvement in Ladies' Hair Nets.

Fig 1.

No. 124,340. Patented March 5, 1872.

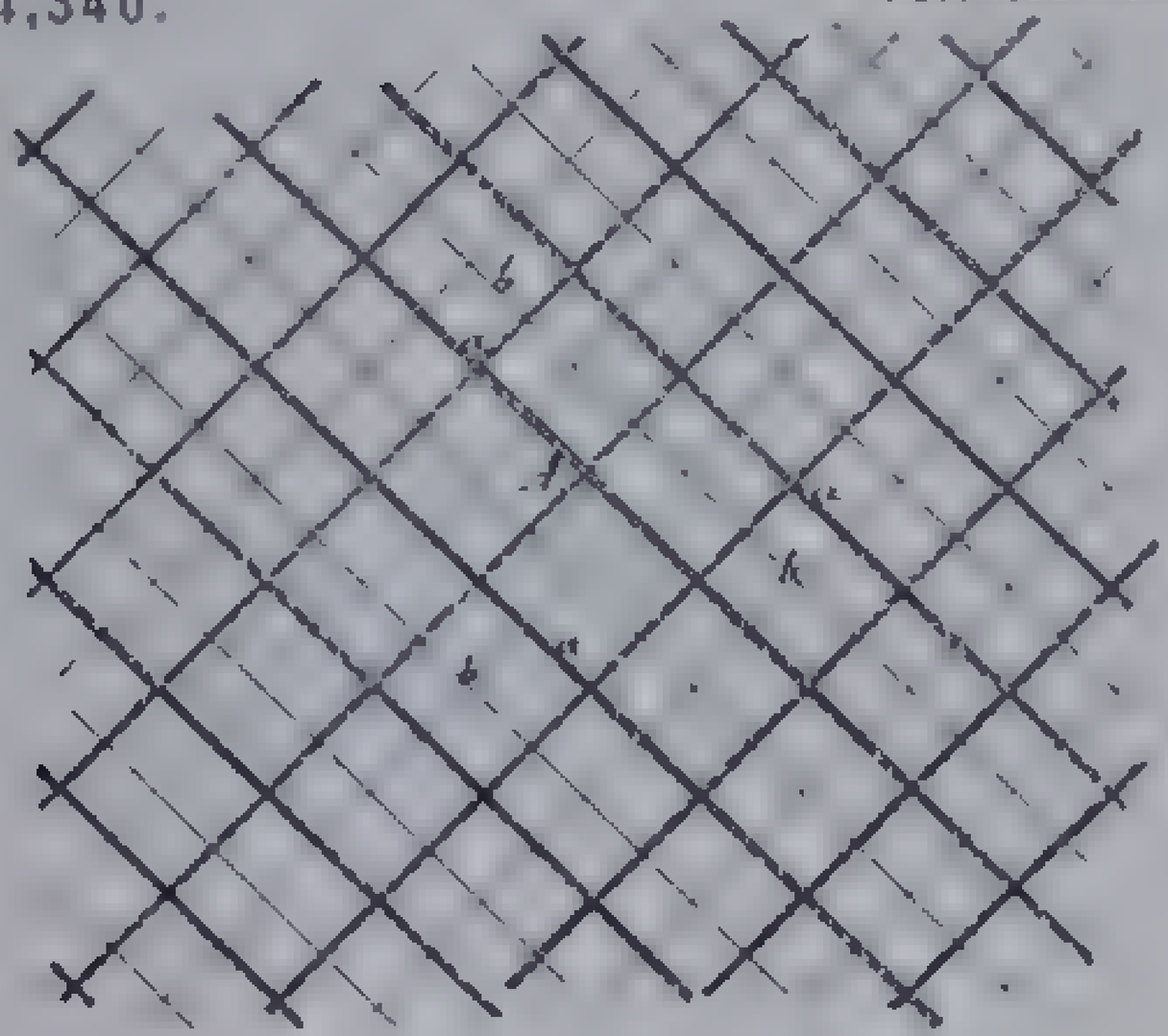
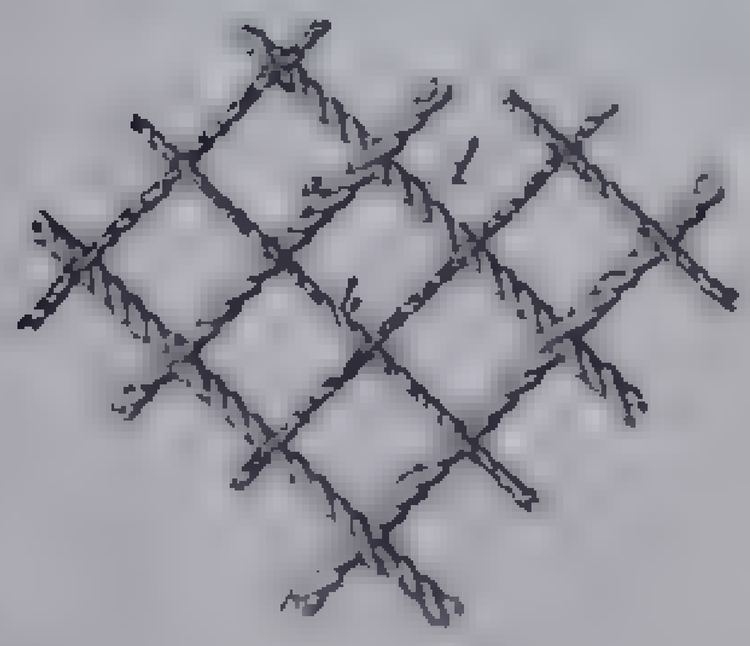


Fig 2



Witnesses.
Edward Gilbert
C. Halsted

Inventor

121,340

UNITED STATES PATENT OFFICE.

JOSEPH DALTON, OF NEW YORK, N. Y.

IMPROVEMENT IN LADIES' HAIR-NETS.

Specification forming part of Letters Patent No. 121,340, dated March 5, 1872.

To all whom it may concern:

Be it known that I, JOSEPH DALTON, of the city, county, and State of New York, have invented a new and Improved Lady's Hair Net; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing

Figure 1 represents a plan or top view of my net; Fig. 2 is an enlarged view of a few meshes, showing the manner in which the net is formed; and Figs. 3, 4, 5, and 6 are modifications.

Similar letters indicate corresponding parts.

This invention relates to a net composed of two or more sets of meshes, each formed of different sized threads, they being combined in a manner too fully described hereafter to need preliminary description.

In the drawing, the letter *A* designates a hair-net, which is composed of meshes *b*, formed from different sized threads. The meshes *a* are formed of coarse threads, and they are of considerable width, so that a net formed of these meshes alone, when placed on the head, would permit the short hair to protrude through it, and it is therefore unsuitable to part the hair up these meshes by the secondary meshes *b*. These secondary meshes are, by preference, made of very fine silk threads, so that they are invisible when the net is worn, and at the same time, by these secondary meshes, the hairs are effectually held down. The meshes *b* (when an auxiliary set is used) are attached to the meshes *a* in the middle of their [illegible] and when two or more sets are introduced, they are placed equidistant, or nearly so, and the two sets of meshes—that is, the main set *a* and auxiliary set or sets *b*—are so formed and connected with each other that either set can be entirely broken away without destroying the other. If the fine meshes are cut at the same, are torn, therefore each fern mesh can be cut out without destroying the main [illegible].

The meshes *a*, as well as the meshes *b*, are, by preference, made of double strands, which pass through each other, as shown in Fig. 2, they being fabricated in a manner well known to lace manufacturers; but I do not confine myself to the precise method of forming the meshes. They may, in some cases, be composed of three or more [illegible], united by twisting [illegible] and of varying qualities and color of thread.

The auxiliary meshes, when more than one set is used, may be arranged at acute angles to the main meshes, and may, of preference, be grouped together.

What I claim as new, and desire to secure by Letters Patent, is—

A head or hair net composed of a main set of meshes fabricated of coarse thread, combined with an auxiliary set or sets of meshes fabricated of fine thread, substantially as described.

J. DALTON.

Witnesses:
W. HALL,
E. F. KASTENHUBER.

(155.)

F. O. DARBY.

Improvement in Preserving Sugar Cane.

No. 122,936. Patented Jan. 23, 1872.

Fig. 1.

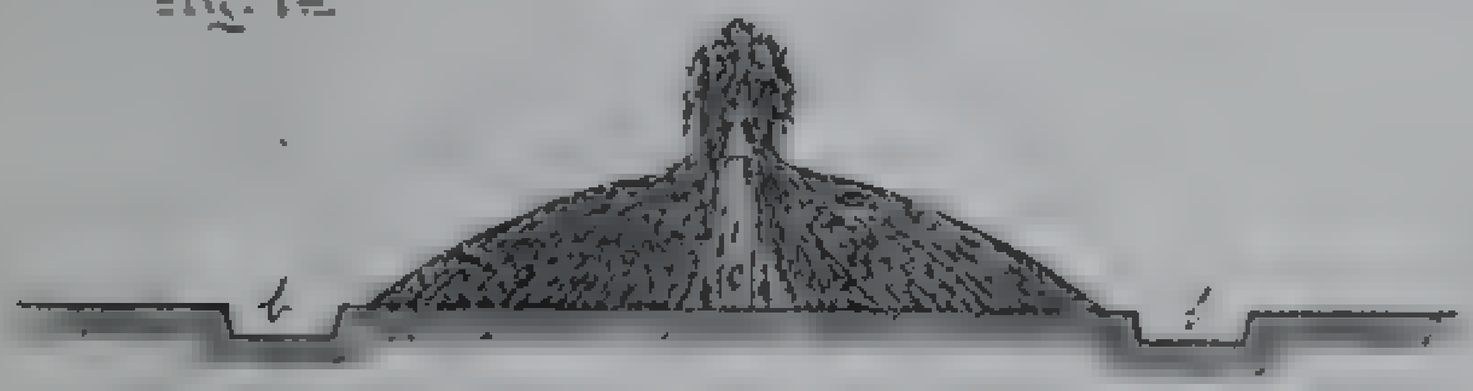
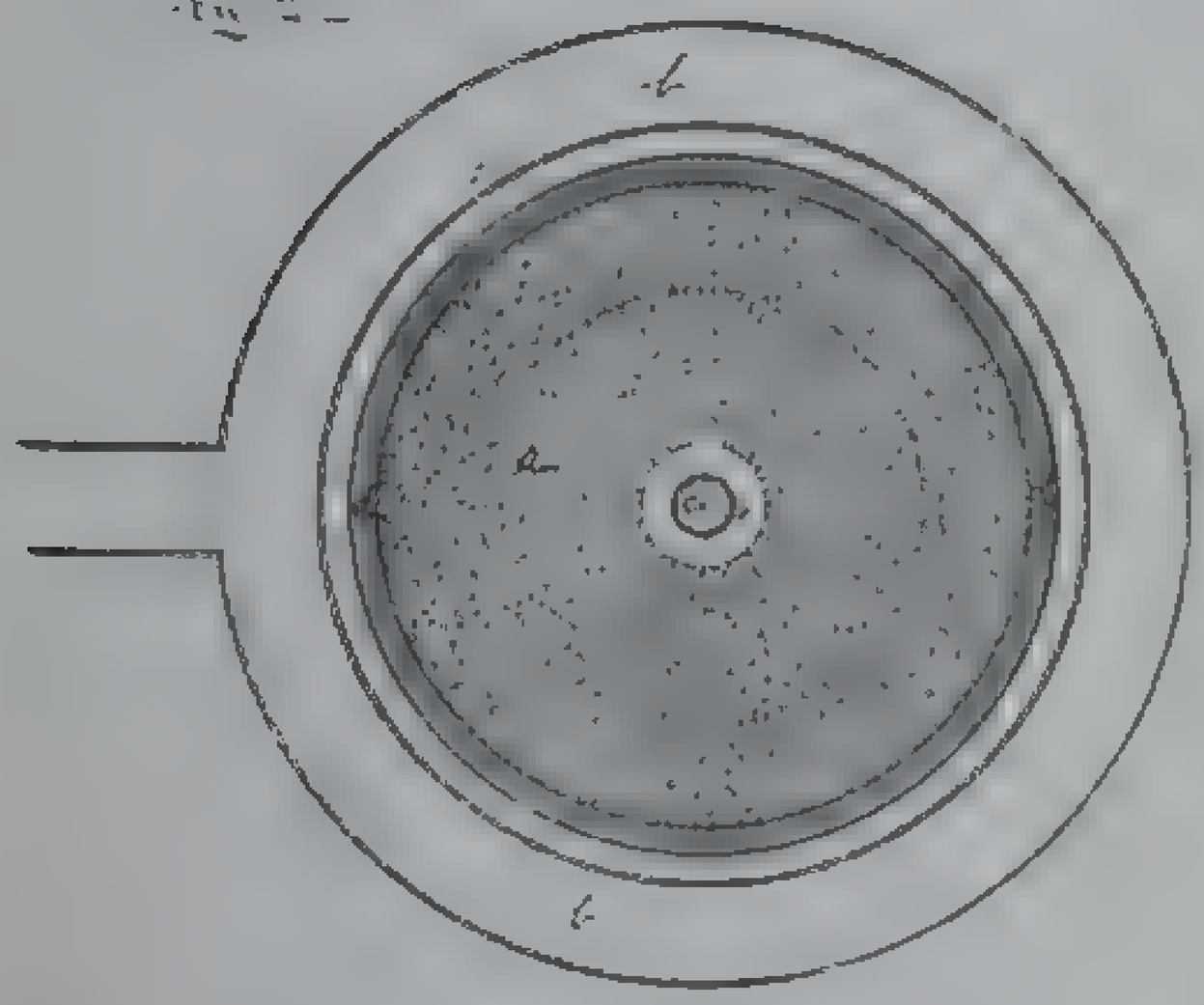


Fig. 2.



Witnesses
L. W. Abbott
H. de Jonkine

Inventor
Francois O. Darby,
per Inderis & Obmeliad
attorneys

122,036

UNITED STATES PATENT OFFICE.

FRANÇOIS O. DARBY, OF ATTAKAPAS, LOUISIANA.

IMPROVEMENT IN PRESERVING SUGAR-CANE.

Specification forming part of Letters Patent No. 122,036, dated January 23, 1872.

I, FRANÇOIS O. DARBY, town of Attakapas, parish of St. Landry and State of Louisiana, have invented a new, useful, and Improved Method of Preserving "Planting-Cane," or what is technically known throughout the sugar-producing sections of Louisiana as "plant cane;" and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the drawing annexed constituting a part of this specification.

My improvement relates to an arrangement of the stalks of cane which are to be selected from the general crop of a sugar-plantation and preserved until the proper season for planting arrives. The especial object which I have in view by the peculiar arrangement above mentioned is the perfect preservation of the cane retained for planting purposes from the destructive effects of water, heat, and cold during the interval elapsing between the time of cutting said "plant-cane" and the time of planting the same.

The method by which I accomplish the above desirable object is the result of many years' experience as a sugar-cane producer. My experiments in the preservation of cane in the manner hereinafter described have resulted in perfect success; and in view of the great importance of my invention, not only to sugar-planters but to the public in general, my invention becomes exceedingly valuable, and hence entitled to protection, that I may reap the benefit of my experiments.

The primary object which I have in view in my invention is the prevention of the evaporation of the juices from the cane-stalks, while at the same time I preserve their vitality until the period of time at which they are required to be planted. This I accomplish by placing the lower or cut end of each stalk in an upright position in direct contact with the earth bed upon which my "mat" is established. The stalks placed in this manner will to some extent absorb a degree of moisture from the earth, from the dews, from the air, together with the decomposition of the green cane-leaves, whereby moisture is created, all of which are sources of life and vitality to the cane stalks, causing, likewise, slow vegetation and continuous life.

The second object to be accomplished in my device is the prevention of too much heat or fermentation, which may be created by the decomposition of the green leaves, as before mentioned. This difficulty is obviated in my invention by providing in the center of the mat an open air-flue, by means of which the whole mat is most effectually ventilated, and the surplus heat generated therein is allowed free exit therefrom and a proper degree of temperature at all times maintained, preventing, likewise, the cane from molding and from dry-rot.

The third object accomplished in my improvement is to preserve the cane-stalks from the withering, blighting effects of cold in winter, which is effected by placing the cane-stalks composing the "mat" in a close or compact form, and by placing likewise an embankment of earth around the exterior lower base of the "mat," whereby the cold air is prevented from penetrating the mat from below, and the warm air generated within the mat, as before described, will prevent the ingress of cold air from the upper part thereof.

The fourth and final object accomplished by my improvement is the preservation of the cane-stalks from the effects of water caused by rains; and this desirable object is attained by constructing the mat of a compact and conical form, whereby the water is made instantly to run off into the drains provided for this purpose, whence it is conveyed away from the base of the mat and beyond the power of effecting injury.

To construct my "mat" precaution must be taken first to level off the ground as smooth as possible upon which the mat is to be established, in order that the lower or cut end of every stalk may come in direct contact with the ground, as before stated. The earth should likewise be made quite loose, that the stalks thereon placed may the more readily absorb moisture therefrom, and thereby produce the results sought to be attained. From thirty to forty feet in diameter is recommended as the most desirable size for a single "mat," and proper care must be taken to have the center air-flue of a size to correspond with the size of the mat. Before placing the earth embankment around the base of the mat it will be necessary to place some loose hay, grass, or straw upon the cane to be covered, to prevent the contact of the earth with the said stalks at

E. DEMING.

Improvement in Knife Scouring Boards.

No. 125,124. Patented April 2, 1872.

Fig. 1.

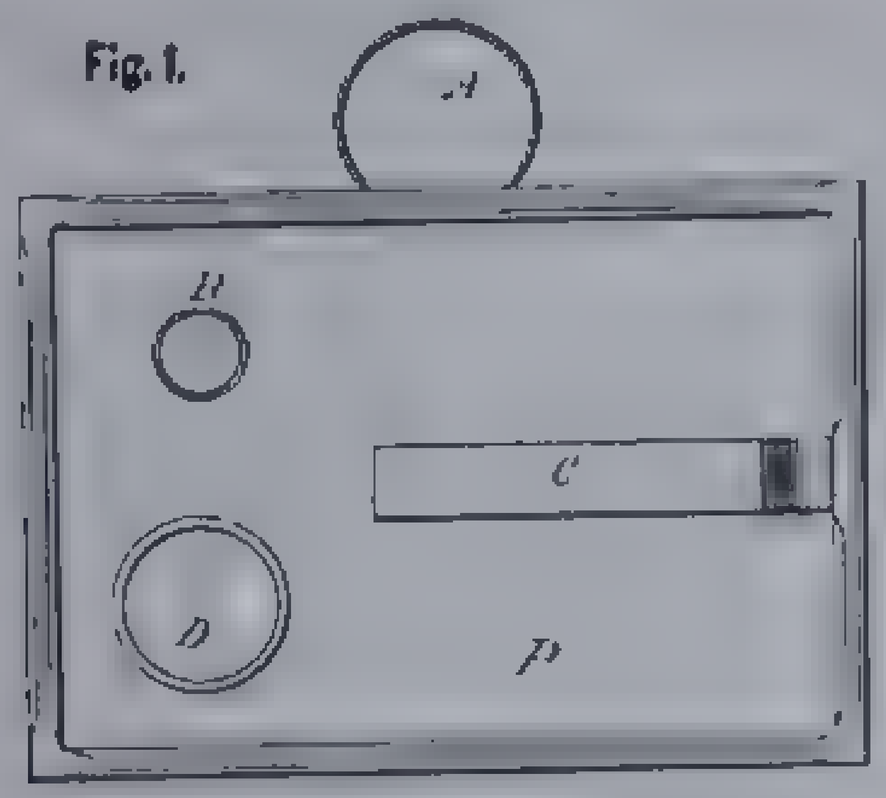


Fig. 3.

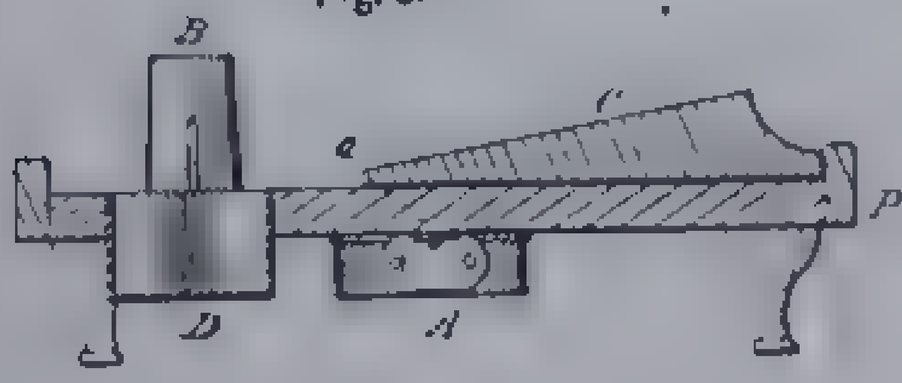
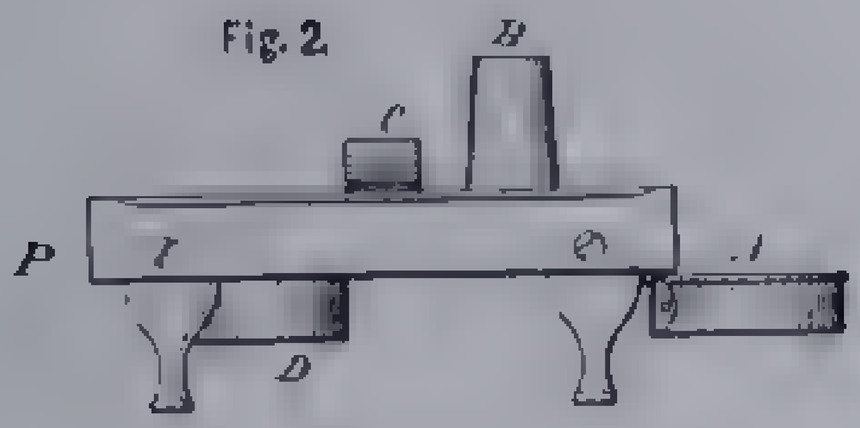


Fig. 2.



Witnesses.

Jasper N. Hammond
Henry N. Tillock

Inventors.

Edgar Deming

125,124

UNITED STATES PATENT OFFICE.

EDGAR DEMING, OF SENECA FALLS, NEW YORK.

IMPROVEMENT IN KNIFE-SCOURING BOARDS.

Specification forming part of Letters Patent No. 125,124, dated April 2, 1872.

SPECIFICATION.

I, EDGAR DEMING, of town of Seneca Falls, county of Seneca and State of New York, have invented certain Improvements for Scouring Knives, which invention is called a "Knife-Scouring Board," of which the following is a specification:

The object and advantages of my invention are to have and keep the scouring materials and implements in a convenient and connected shape, and to facilitate the scouring process, and thus to economize labor in the work.

Description of Accompanying Drawing.

Figure 1 is a top view of the knife scouring board. Fig. 2 is a sectional end view of the same. Fig. 3 is a sectional side view thereof.

P, in Figs. 1, 2, and 3, is a table, ten by fourteen inches, (or larger or smaller if found convenient,) made in any usual manner, with four legs for its support, as shown in said drawing. A is the cup which contains the sand, powder, or other scouring material, and is fastened to the under side of the board by a screw passing through an ear on said cup at *a*, Fig. 3, in such manner that the cup, by turning around on said screw, will stand out from under said "board" and expose its contents for use, as shown at A, Fig. 1, and, by being moved around beneath said board, prevents the material therein from falling out of said cup. B is another cup set into said "board" or table, and held to its place by a rim around the top or mouth thereof to contain the liquid used in scouring.

B is the cork used in scouring, (by being dipped first into the liquid and then into the sand or powder,) and is held to its place by a small standard, which is fixed in the table and fits into a hole in the bottom of said cork. C is the inclined plane on which the knife or other blade is laid during the process of scouring.

I claim as my invention—

The combination and arrangement of the cups A and B with the cork B and inclined plane C on the board P, substantially as and for the purpose hereinbefore set forth.

EDGAR DEMING.

Witnesses:

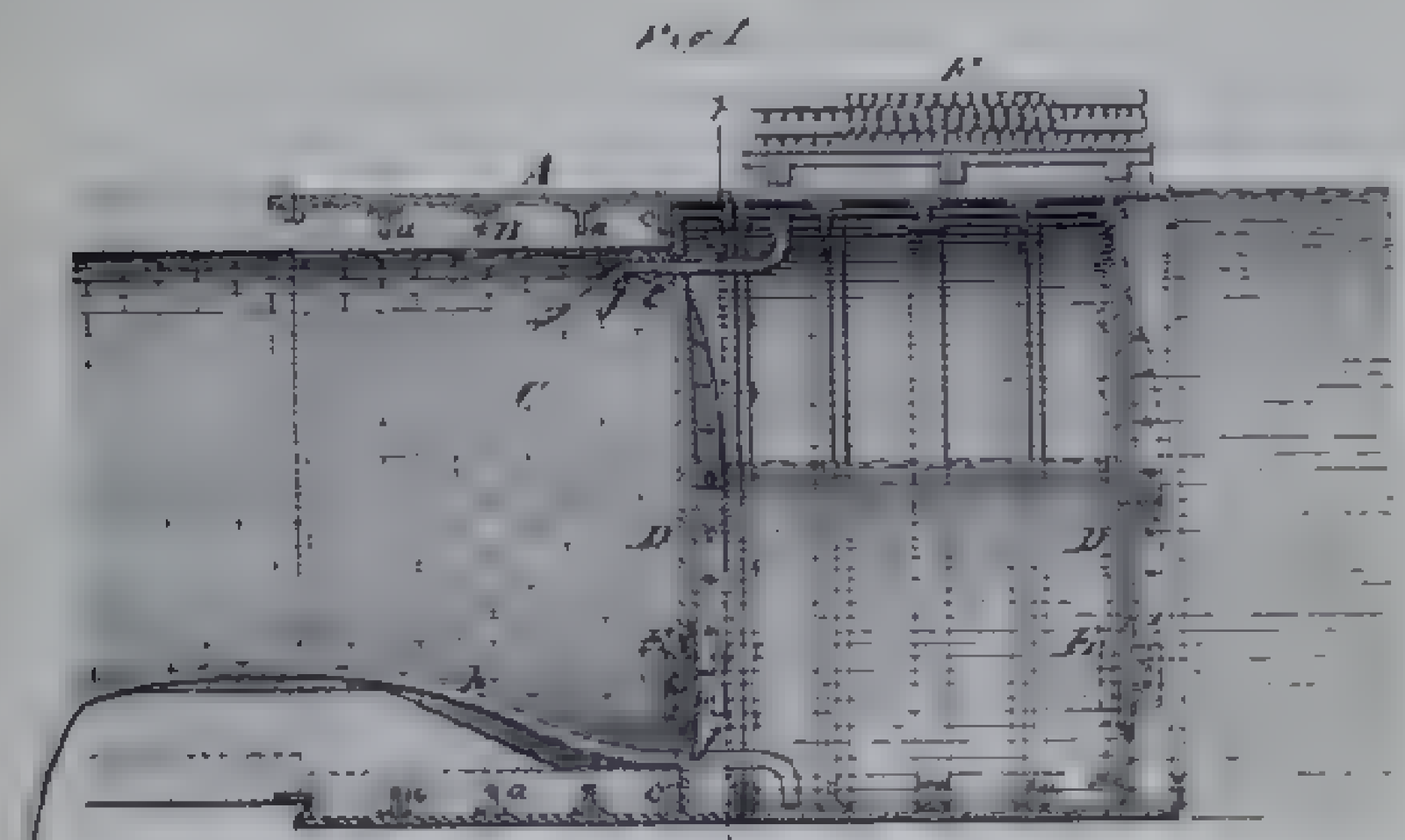
JASPER N. HAMMOND,
Seneca Falls, N. Y.

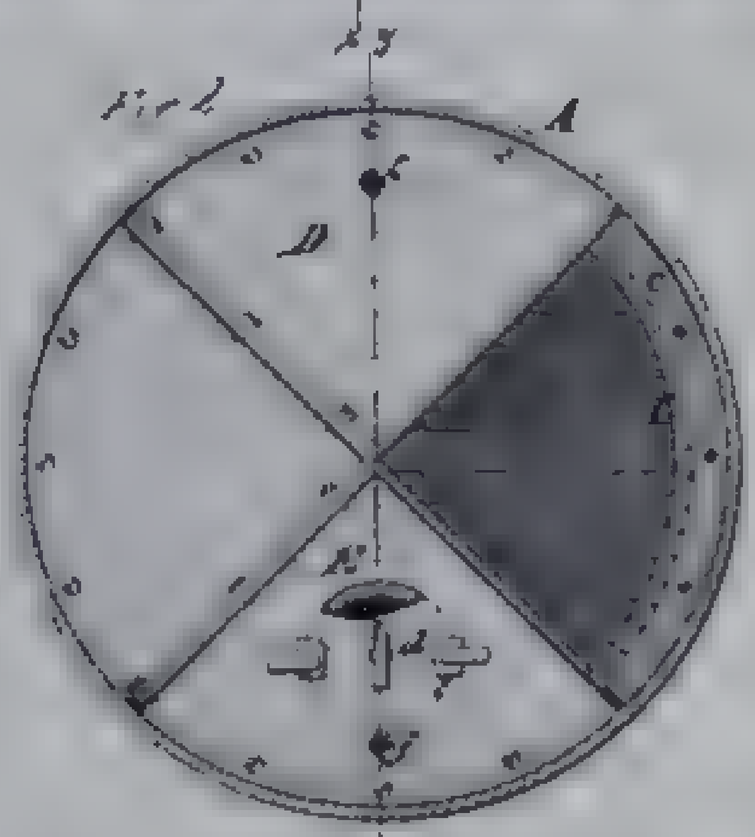
HENRY R. SELLECK.

J. G. FOSTER.

Improvement in Constructing Sub-Marine Tunnels.

No. 124,045. Patented Feb. 27, 1872.





Witnesses

Inventor

124,015

UNITED STATES PATENT OFFICE.

JOHN G. FOSTER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CONSTRUCTING SUBMARINE TUNNELS.

Specification forming part of Letters Patent No. 124,015, dated February 27, 1872

SPECIFICATION.

To all whom it may concern:

Be it known that I, JOHN G. FOSTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Method of Constructing Tunnels, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to marine tunnels; and consists in a novel method of constructing the same in or upon the bed of a river or other body of water by means of shells or hollow metallic cylindrical sections provided with a movable head, as hereinafter fully explained.

In the drawing, Figure 1 is a longitudinal vertical section on the line *y y* of Fig. 2, and shows a portion of a tunnel in process of construction by the use of my hollow metal sections; and Fig. 2 is a vertical cross-section on the line *x x* of Fig. 1, and shows an end view of one of my metallic sections with a portion of one of the movable heads in place.

The object of this invention is to construct a tunnel either upon or partially or wholly in the bed of a river or other body of water, and in this way to avoid the expense and difficulty of tunneling under the bed. As is well known, when the bed is sandy, or of any porous formation, the running of the shaft under the surface is attended with great expense and many difficulties. And, again, when the water is very deep, it is also expensive and difficult to carry the tunnel under its bed, as well as to construct the approaches to it. By means of this invention, a tunnel may be constructed upon the bed of the river when the water is deep enough for that purpose; or, if desired, an excavation may be made of any desired depth, in which to place it, and in this way avoid the expense and difficulty of excavating under the bed and then constructing it.

In constructing a tunnel after this plan, after determining its location and making such excavation in the bed of the river, it may, as may be desired, the approaches on one side be made and completed; but before it reaches the water a short iron hollow cylinder or shell, A, having narrow bands B on its inner side, with projecting ribs *a*, is secured in its end, and a circle of brick-work or suitable masonry, C, is then built against the inner surface of this cylinder, as clearly shown in Fig. 1. This mason-work is the continuation of that in the entrance or approach of the tunnel, and, in combination with the cylinder and its strengthening bands or ribs, makes the structure very strong. Near the other end of the cylinder is attached a head, D, so as to be movable. This head is made in four or more sections, so constructed that they can be united and bolted together, and then the whole be secured and bolted to a rib or flange, *c*, a short distance within the outer rib *a* of the cylinder. One of the sections of this head is provided with a man hole and cover, E, so constructed and arranged that, when in place, it will be water-tight; and also that it may be removed by means of handles *d* from either side. There are also two small openings, *e* and *f*, one near the upper and the other near the lower side of this head, for a purpose hereinafter explained. All the joints of the head, as well as its connections to the cylinder, are made water tight. After this cylinder, with its head, is properly secured in place, all necessary excavation on the end beyond the head for the attachment to it of a similar cylinder, A, with a similar head, D, is then made; and this similarly-constructed cylinder is then sunk in line with first cylinder, and arranged so that its outer rib, or its inner end, will adjoin the outer rib of the outer end of the first cylinder, and there held in place by weights F until secured to the first cylinder, which is done by a marine diver, who enters the outer man hole, and bolts the adjoining flanges of the adjoining cylinders together, so as to be water-tight. This done, he returns through the man hole, and secures that in place. An air tube, *g*, is then introduced through the opening *e*, and a siphon tube through the opening *f*, when the water is withdrawn from the second cylinder. After it is withdrawn, it is entered through the inner man hole and the inner head is then removed, and the mason-work is continued on into the second cylinder. The head thus removed is attached to another cylinder, which is sunk, arranged, held in place, and connected in the same manner; and in this way the work proceeds until the tunnel is completed.

It is obvious that the form of the iron shells may be other than cylindrical, if desired, as any other form possessing suitable strength

JOHN GIBSON, Jr.

Soles and Heels for Boots and Shoes.

No. 124,127. Patented Feb. 27, 1872.

Fig. 1.

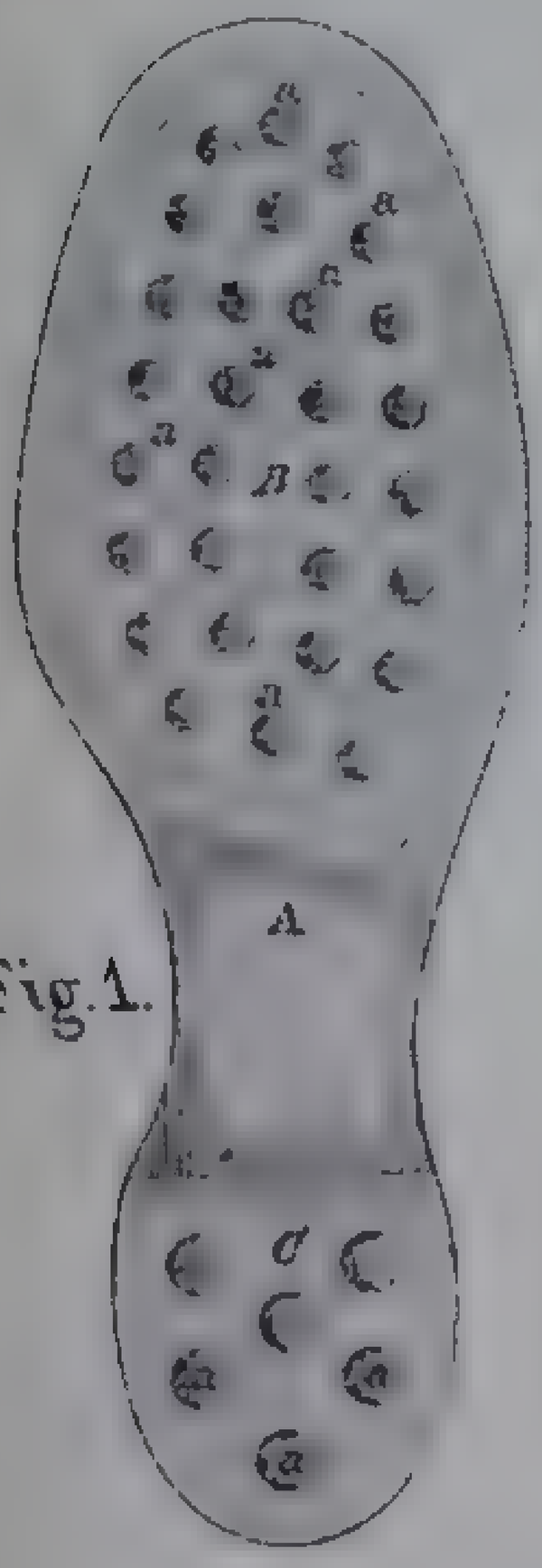


Fig. 2.

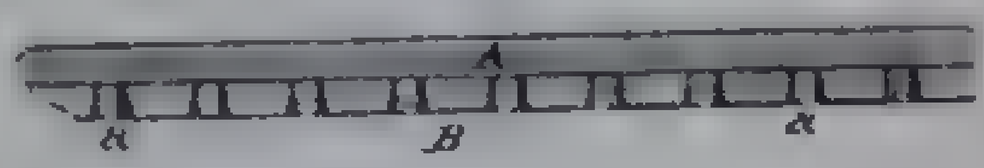


Fig. 3.

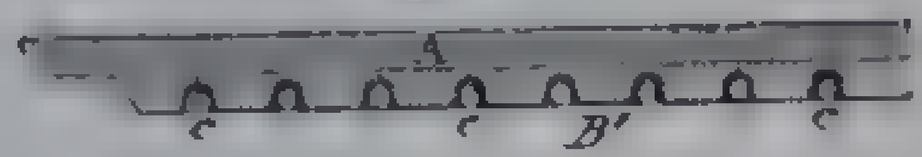


Fig. 4.

Witnesses { Alf. S. Hollands
A. L. Van Wandle

John Gibson Jr
Inventor.

124,127

UNITED STATES PATENT OFFICE.

JOHN GIBSON, JR., OF ALBANY, NEW YORK.

IMPROVEMENT IN SOLES AND HEELS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 124,127, dated February [illegible].

To all whom it may concern

Be it known that I, JOHN GIBSON, Jr., of the city and county of Albany and State of New York, have invented a new and useful Improvement in Soles and Heels for Boots and Shoes; and I do hereby declare that the following is a description thereof, reference being had to the accompanying drawing forming a part of this specification, in which

Figure 1 represents a vertical view of the sole of a boot or shoe, with the heel attached, illustrating the improvement. Fig. 2 is a longitudinal vertical view of the said [illegible]. Fig. 3 is a longitudinal vertical view of a modification of the invention. Fig. 4 is a longitudinal vertical section of a heel, illustrating a modification of the invention applied thereto.

The nature of my invention consists in so forming the soles or heels of boots and shoes that they will be capable of always presenting and maintaining in their wear an uneven or irregular face.

This uneven or irregular face I secure by means of an outer or wearing sole, made of rubber, leather, or other suitable material, furnished with perforations; or by an outer sole furnished with deep cavities, in lieu of perforations; or by a combination of both such perforations and deep cavities in the same sole.

The object of this invention is to furnish the outer soles or heels of boots and shoes with an uneven wearing-surface, which uneven surface will be maintained until the sole or heel is quite worn out, and thus, under every circumstance and at all stages of its wear, present to the surface walked upon a contacting surface that will not, by its wear, become even or smooth, thus always insuring to the wearer a safe foot-hold, secure from the danger of slipping.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the drawing and the letters of reference marked thereon, the same letters indicating like or similar parts.

In the drawing, A represents the inner sole of a boot or shoe, to which the "uppers" are attached by pegging or otherwise. B represents the outer or wearing sole; and C represents a heel constructed according to one of the modifications of this invention.

As this invention relates only to securing to a wearing or outer sole or heel a permanent uneven surface throughout all their wear, and such uneven surface could be secured and maintained by any of the modifications shown in Figs. 1, 2, 3, and 4, I would use either or any of the same, either in combination or separately.

The wearing sole B, Figs. 1 and 2, consists in a sole of leather or rubber, or other suitable material, furnished with perforations, *a*, placed at such intervals as would leave sufficient material for wear. The said perforations (being in form, size, and arrangement unlike the usual slight indentations made on the wearing face of rubber soles) will always preserve an uneven surface throughout its wear, while the slight indentations now made in rubber soles, as above referred to, are entirely effaced and the soles become smooth by a few days' wear. The sole B', instead of being perforated entirely through, as in Fig. 2, may have sunk in it deep cavities, *c*, as shown in Fig. 3, which cavities *c* will be the same in permanent result as the perforations *a* in Fig. 2. The heel C, Fig. 4, may, like the sole in Fig. 2, be furnished with perforations *a*, or may be furnished with deep cavities, as sole in Fig. 3.

In this invention, and in the use of the perforations *a* or cavities *c*, as shown in Figs. 1, 2, 3, and 4, I do not confine myself to use any particular size, form, or number of perforations or cavities, or to any regularity of arrangement of the same in any given case, but would variously adapt the said perforations or cavities in their several features to the kind of boot or shoe to which the improvement is applied.

Having described my invention, what I claim and desire to secure by Letters Patent, is

In soles or heels of boots and shoes, the perforations *a*, or the cavities *c*, substantially in the manner set forth, for the purpose specified.

JOHN GIBSON, JR.

Witnesses:
M. S. HOLLANDS,
A. L. VAN ZANDT.

SAMUEL GISSINGER.

Improvement in Knife Sharpeners.

No. 122,597. Patented Jan. 9, 1872.

Fig. 1

Fig. 2

Witnesses:

Inventor:

122,597

UNITED STATES PATENT OFFICE.

SAMUEL GISSINGER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN KNIFE-SHARPENERS.

Specification forming part of Letters Patent No. 122,597, dated January 9, 1872, antedated December 23, 1871.

To all whom it may concern:

Be it known that I, SAMUEL GISSINGER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful article of manufacture—viz., a Knife-Sharpener; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my new article of manufacture consists in constructing a "knife-sharpener" with the part next to the handle made triangular in form, (when viewed in cross-section,) and the other portion of it made in the usual form.

To enable others skilled in the art to make and use my new article of manufacture, I will proceed to describe its construction and operation.

In the accompanying drawing which forms part of my specification, Figure 1 is a side view of my new article of manufacture. Fig. 2 is a transverse section of the same at line *y* of Fig. 1. Fig. 3 is a transverse section of the same at line *y'* of Fig. 1.

In the accompanying drawing, A represents the handle, which is constructed of wood or other suitable material, and made in any of the known forms. B C represents the "steel." That part of it marked B is made triangular in form when viewed in cross-section, and the sharp points D are used for planing off the sides of the knife, so as to form a sharp edge, which is accomplished by placing the part B at right angle to the knife-blade, with a sharp edge, D, resting on the blade of the knife, giving the greatest pressure to the "steel" next to the cutting-edge of the knife. Then, by moving the "steel" backward and forward over the knife-blade, the sharp edge D will plane or cut down that portion of the knife-blade so as to form a sharp cutting-edge, which is then made smooth by the part C of the "steel," which part is of the ordinary form, and used in the usual manner.

What I claim as my invention is—

A new article of manufacture—viz., a knife-sharpener, the "steel" of which is made in the form herein described, and for the purpose set forth.

SAMUEL GISSINGER.

Witnesses:

A. C. JOHNSTON,

JAMES J. JOHNSTON.

(44)

JOHN GOLDSBOROUG

Patterns for Casting Printing-Disks.

No. 124,350. Patented March 5, 1872.

FIG. 1.

FIG. 2.

FIG. 5.

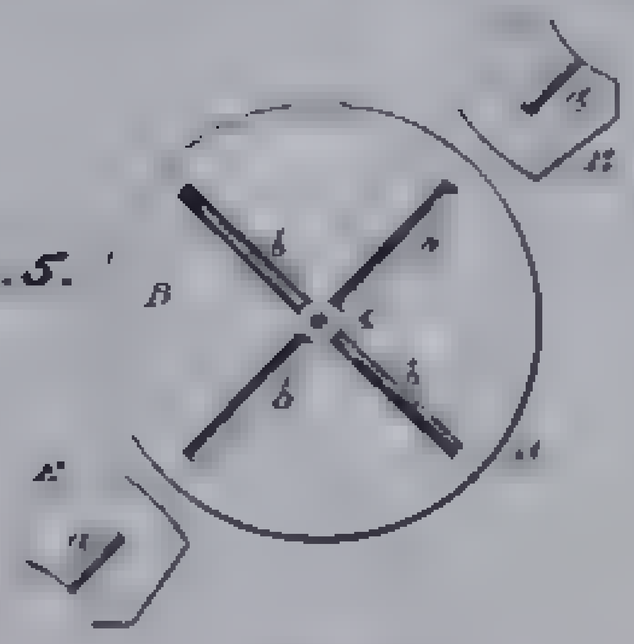


FIG. 3.

FIG. 4.

WITNESSES.

John Goldsborough

121,350

UNITED STATES PATENT OFFICE.

JOHN GOLDSBOROUGH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PATTERNS FOR CASTING PRINTING-DISKS.

Specification describing an Improved Pattern for Printing Disks, &c., invented by JOHN GOLDSBOROUGH, of Philadelphia, Pennsylvania.

Improved Pattern for Molding Printing Disks, &c.

My invention consists of a pattern for molding the printing disks of hand stamping machines and other circular or cylindrical objects having letters or characters in relief upon their curved surfaces, the object of my invention, which is fully described hereafter, being to enable the pattern to be contracted in diameter so that it can be drawn from the mold without destroying the latter.

In the accompanying drawing, Figure 1 is an edge view of a pattern for molding printing disks constructed in accordance with my invention; Fig. 2, a central view of the same and of the mold; Fig. 3, a face view of the pattern with the upper plate removed; Fig. 4, the same as Fig. 3, with the central portion removed and the outer sections drawn in so as to contract the diameter of the pattern sufficiently to enable the latter to be drawn or lifted from the mold; and Fig. 5, a view representing the lower plate and two of the sections of the pattern detached from each other.

The pattern shown in the drawing consists of the numbering or dating disks of a hand stamping machine, upon the periphery of which the dates are to be formed in raised figures.

It will be evident that an ordinary solid pattern having raised letters or figures upon its periphery corresponding to those of the printing disk could not be drawn from the mold without destroying the latter; but by constructing the pattern as I will now proceed to describe, so that it can be contracted in diameter while in the mold, this difficulty is overcome.

The pattern is of a sectional structure; and consists mainly of upper and lower plates A and B, a central circular block, D, confined between the said plates, and a number of radial sections, E and F, confined between the said plates and circular block, and having letters or figures in relief formed upon their curved outer edges, which, united, form the periphery of the pattern. The sections F of which there are four in the present instance, have upon their under sides projections *a* adapted to correspond to radial grooves *b* formed in the plate B, these grooves serving as guides for the sections in their movements from and toward the center of the pattern, and determining the extent of the outward movement of the said sections. (See Fig. 5.) The inner curved edges of the sections E bear against the periphery of the circular block D, which thus retains the sections in the position to which they are adjusted outward, as shown in Figs. 2 and 3. The sections F are of a triangular shape, and are adapted to correspond between the sections E. On the upper faces of the sections E and F are deep curved recesses *c*, which, when the said sections are adjusted outward to their full extent, form together a continuous circular groove, *c'*, adapted for the reception of a corresponding circular rib, *d*, on the under side of the plate A, the latter thus serving to lock and hold together the whole of the sections. The sections of the pattern are secured together so as to enable the whole to be handled, without falling to pieces, by a rod, H, (Fig. 2,) the lower threaded end *e* of which is screwed into threaded openings *e'* formed in the plates A and B and block D. This rod, besides serving as a convenient handle for the pattern, forms the gate in the mold, as will be understood on referring to Fig. 2.

In order to draw the pattern the upper section of the mold is first removed, as usual, after which the plate A is lifted from the pattern by means of the screw-rod, leaving the sections exposed, as shown in Fig. 3. The block D, which is made slightly tapering toward its lower edge, is then also removed by means of the screw rod, and the sections F are then slid inward upon the radial grooves *b* until they are brought in contact with each other, as shown in Fig. 4. After which the sections E are also slid inward to the full extent permitted by the sections F. This will sufficiently contract the pattern in diameter to enable the whole to be lifted or drawn from the mold by means of the screw rod inserted into the threaded hole *e* of the under plate B.

Patterns constructed substantially as above described can be used in molding printing wheels for numbering presses or other circular or cylindrical [illegible] letters in relief [illegible]

ALBERT H. GOSS.

Improvement in Clothes Wringers.

No. 125,129. Patented April 2, 1872.

Fig. I

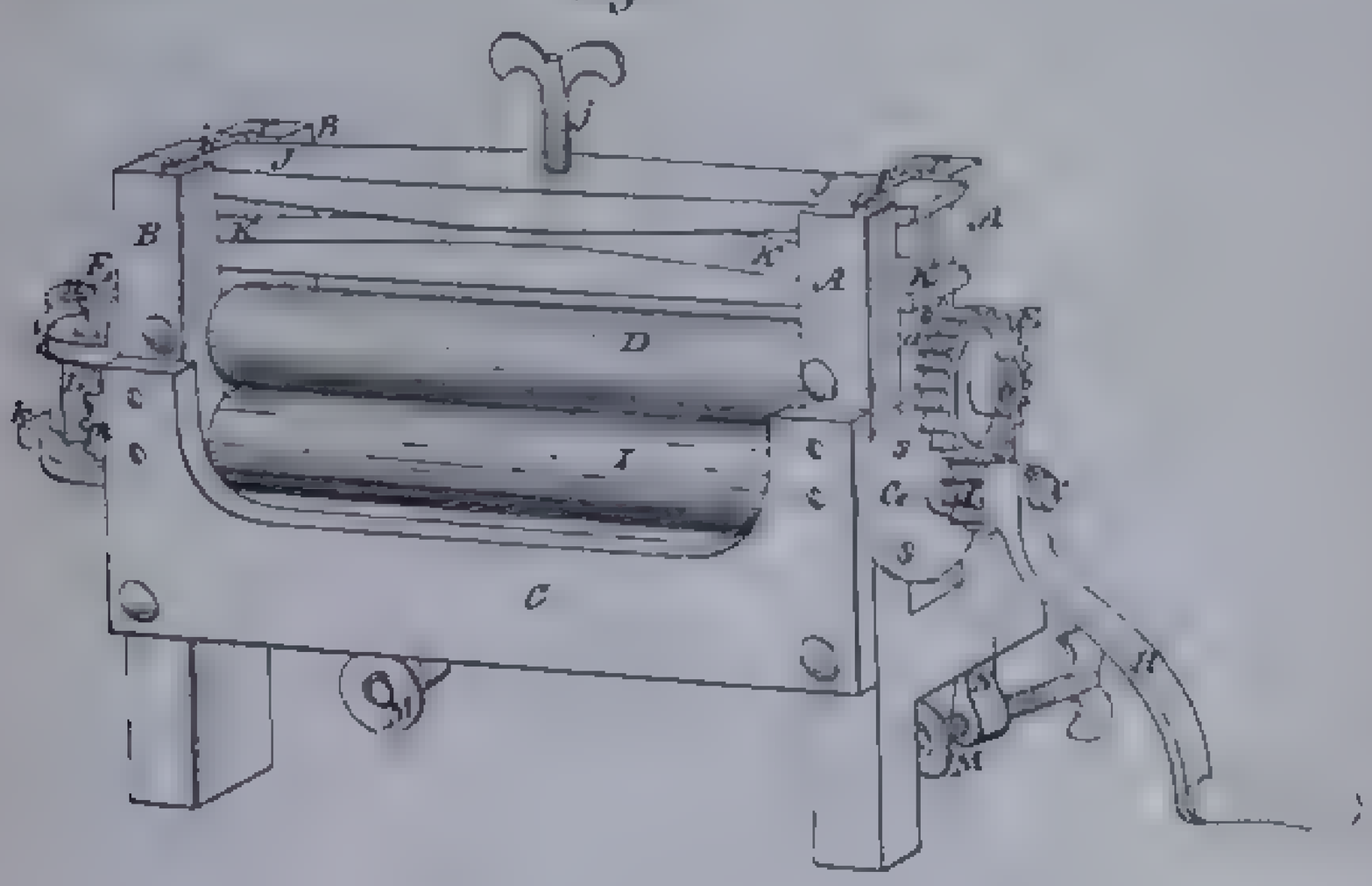


Fig 2.

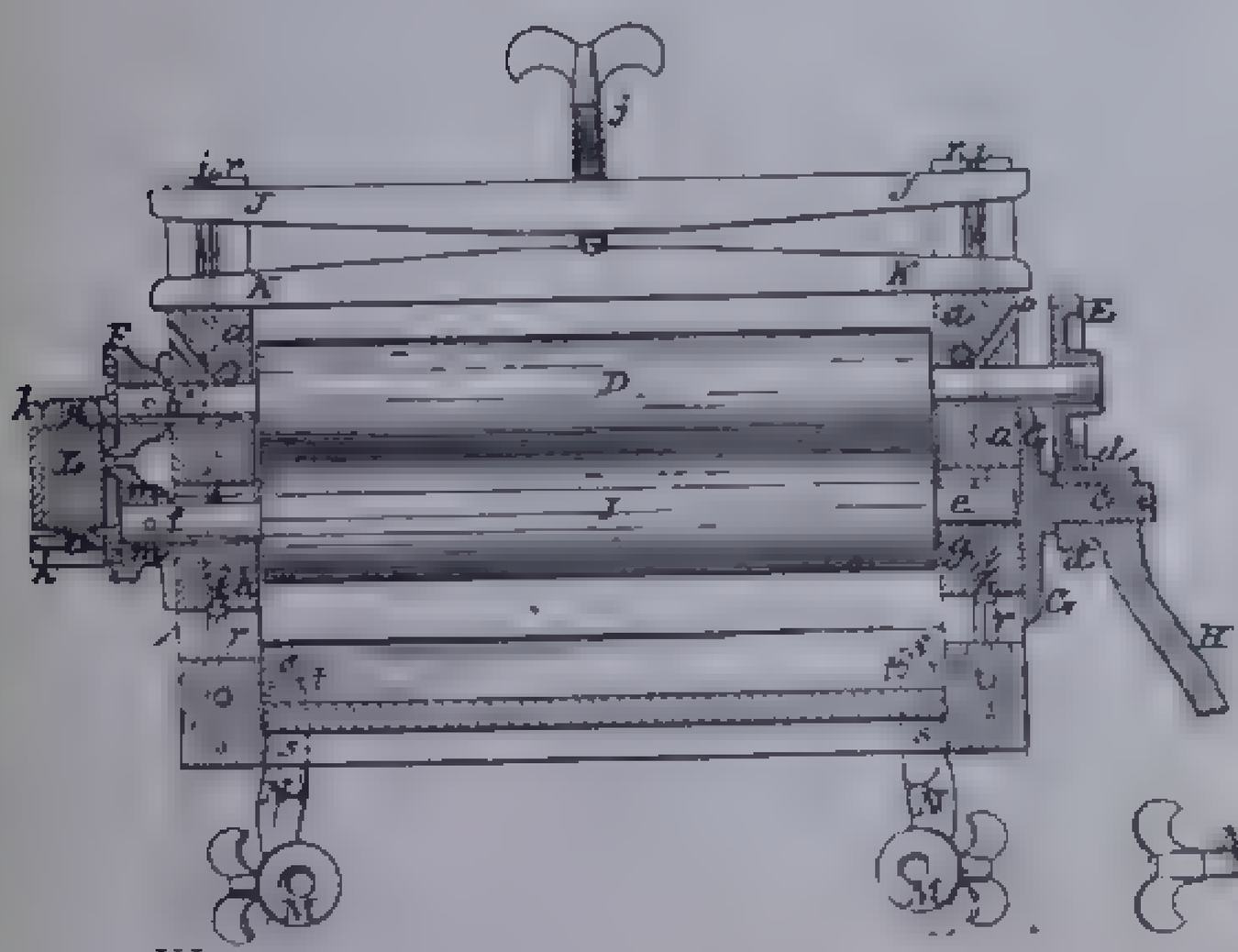
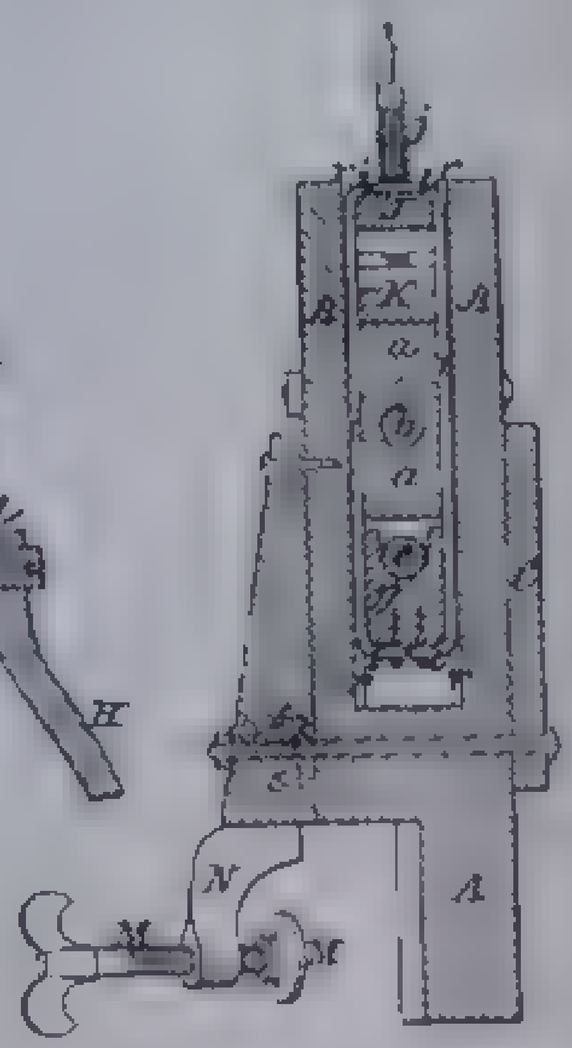


Fig 3.



Witnesses

Wm. G. Henderson

Edmund Masson

Inventor:

Albert H. Goss

By atty. H. B. Stoughton

125,129

UNITED STATES PATENT OFFICE.

ALBERT H. GOSS, OF AUBURN, NEW YORK.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 125,129, dated April 2, 1872.

To all whom it may concern:

Be it known that I, ALBERT H. GOSS, of Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Clothes-Wringers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 represents a perspective view of the wringer. Fig. 2 represents a vertical longitudinal section through the same, leaving the rolls in full. Fig. 3 represents a vertical transverse section through the wringer, taken through one of the end pieces thereof.

Similar letters of reference, where they occur in the separate figures, denote like parts of the wringer in the drawing.

My invention consists in gearing a pair of parallel rolls, one of which turns in fixed bearings and the other in movable bearings, so that said rolls may part to allow variable thicknesses of clothes to pass through between them, but not run out of gear with each other.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

The end pieces of the frame are shown at A B, and the side pieces, by which they are held together, at C; the whole forming the frame for containing the operative parts of the wringer, as will be explained. In the slot or opening cut, or otherwise formed, in the end pieces A B are permanently fastened the bearing pieces or blocks *a a*, in which the journals *b b'* of the upper roll D are supported and turn, and through which bearings said journals project far enough to receive, the one, *b*, the cogged wheel E, and the other, *b'*, the crown gear F. To the end piece A of the frame there is permanently attached a plate, G, upon which is cast or wrought a journal, *c*, on which journal a pinion, *d*, is placed and turns, said pinion gearing into and turning the cog-wheel E on the journal *b* of the upper roll D, and so turning said upper roll. The pinion *d* has cast upon it or attached to it a crank, H, by which hand-power is applied to operate the rolls. It is obvious, of course, that as the journals *b c*, on which the cogged wheel E and pinion *d* respectively turn, these two gears cannot separate or get out of gear with each other. The under roll I of the pair of wringing or squeezing rolls has its journals *e f* supported in yielding bearings *g h*, also placed in the slot or openings in the end pieces A B and underneath those *a a*. The bearing pieces *g h* are suspended in the slots or openings in the end pieces by rods *i i*, which take over the ends respectively of the upper leaf J of an adjustable and yielding spring, arranged in the upper ends of said slots or openings in the end pieces A B; the under leaf or part K of which spring has its ends resting upon the stationary bearing-blocks *a a*, and a thumb-screw, *j*, passes through the upper leaf and bears against the under leaf of the spring, so that the power or strain with which the under roll I is held up to and against the upper roll D may be regulated by said set or thumb screw. On that side of the frame opposite to where the pinion *d* and cogged gear E are placed and worked there is arranged a bracketed frame, *k*, in which a long vertical pinion, L, is hung by its journals *n n*. The crown-wheel F, hereinabove described as placed on the journal *b'* of the upper roll D, gears into and turns this long pinion L, and the long pinion meshes with and turns a bevel gear, *m*, fast on the journal *f* of the under roll I, and thus this under roll is turned. As the under roll leaves the upper one, to allow the clothes to pass through between them, the crown gear *m* moves on the long pinion L, but still remains in gear with it and continues to be turned by it. The pinion *e* of the under roll I has no gearing upon it of any kind, and has no connection with any other part of the wringer than its bearing block *g*, and is free to move with said bearing-block, which is controlled, however, by the spring J and stirrup or suspension-rods *i i*.

The power to rotate the under roll I is transmitted from the crank H through the pinion *d*, gear E, upper roll D, crown-gear F, long pinion L, and crown-gear *m*; and thus the under roll may yield at any and all times, but always remain in gear with the upper one and the driving-power.

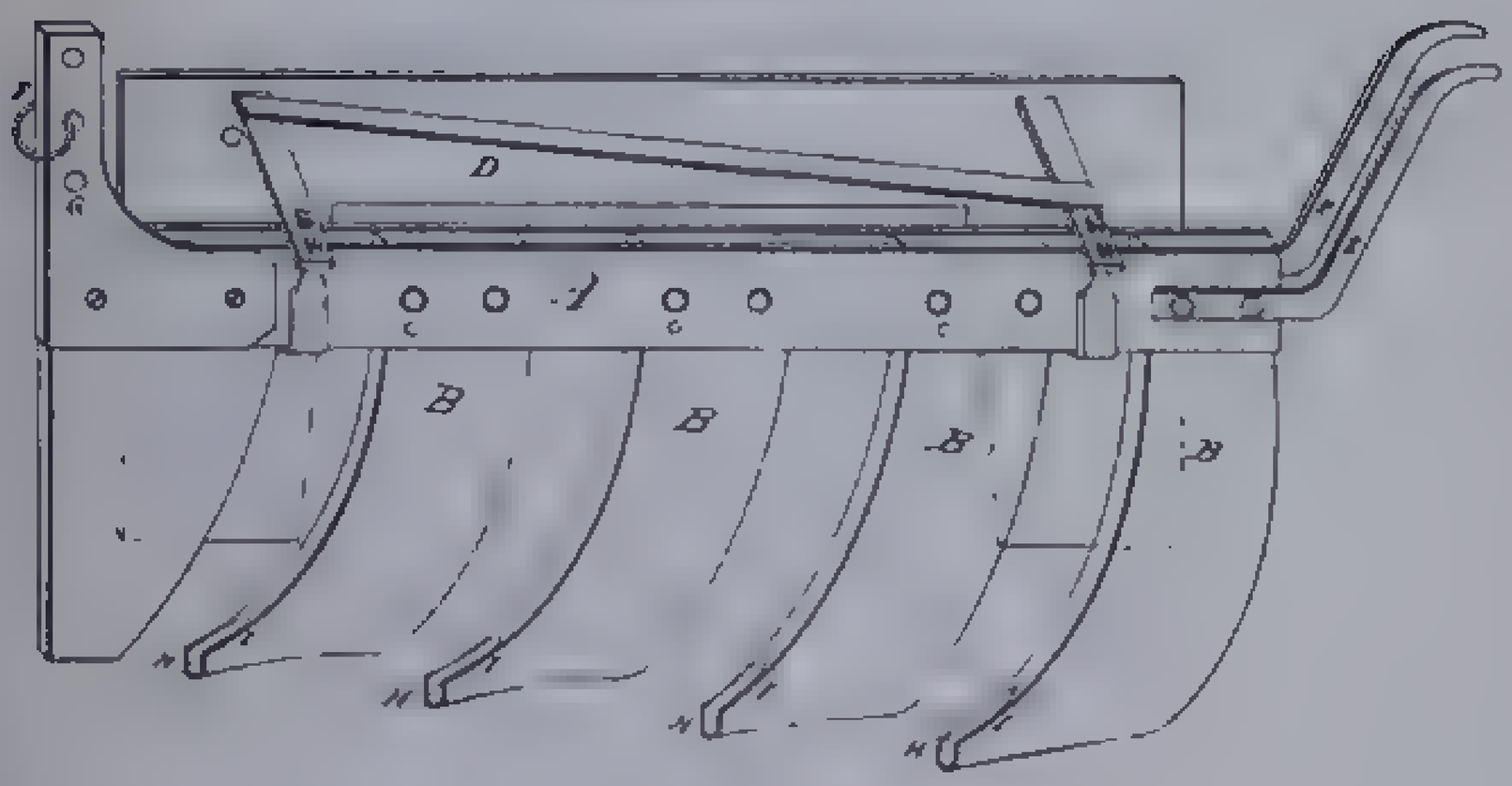
The rolls are covered with rubber in the usual well-known way, and, not being dependent upon surface-friction for their rotation, the rubber is not twisted off from the rolls. Oil-holes *o o* may be provided for oiling the jour-

GEORGE B. GRUMAN.

Improvement in Ice Plows.

No. 125,131. Patented April 2, 1872.

Fig 1



Witnesses:

Wm Vine
Jos. L. H. Foote

Inventor:

George B Gruman

UNITED STATES PATENT OFFICE.

GEORGE B. GRUMAN, OF RIDGEFIELD, CONNECTICUT.

IMPROVEMENT IN ICE-PLOWS.

Specification forming part of Letters Patent No. 125,131, dated April 2, 1872.

SPECIFICATION.

I, GEORGE B. GRUMAN, of the town of Ridgefield, county of Fairfield and State of Connecticut, have invented certain Improvements in the Construction of Ice-Plows, of which the following is a specification:

My invention relates to the application of gouge-pointed points and keen cutting side edges to the several teeth or cutters.

General Description.

In the drawing accompanying this specification, Figure 1 is a side view of the ice plow, showing the gouge-pointed cutters.

A is the beam of the plow, composed of two thicknesses of iron plates to receive the broad teeth or cutters B, which are placed at proper distances apart between the two plates A, and are fastened and secured together by bolts C, passing through the same, as shown in the drawing. D is the guide and gauge, running on the ice parallel with the beam A. F, the vertical stem, to which the horse is attached, having holes G to alter the line of draft. E E are the handles for guiding the plow.

My invention consists of the application of the gouge-shaped points H to the cutters B with the keen cutting side edges I, the concave part tapering upward and cutting on the front edge.

The advantage of these gouged shaped points and sharp side edges is the improved lightness of the plow in operation, and the facility with which they clear the sides of the groove or channel as they descend and travel along.

I do not claim as new the gouge points of themselves, but only the arrangement and application to the teeth or cutters of ice-plows.

What I claim as my invention is—

The arrangement and application of gouge points and cutting side edges to the cutters or teeth of ice-plows, in the manner substantially as herein set forth and described.

GEORGE B. GRUMAN.

Ridgefield Station, Conn., December 16, 1871.

Witnesses:
JOSEPH F. FOOTE,
WM. VISE.

2 Sheets—Sheet 1.

GEORGE GUILD.

Paper Bag Machine.

No. 123,013. Patented Jan. 23, 1872.

Fig. 1.

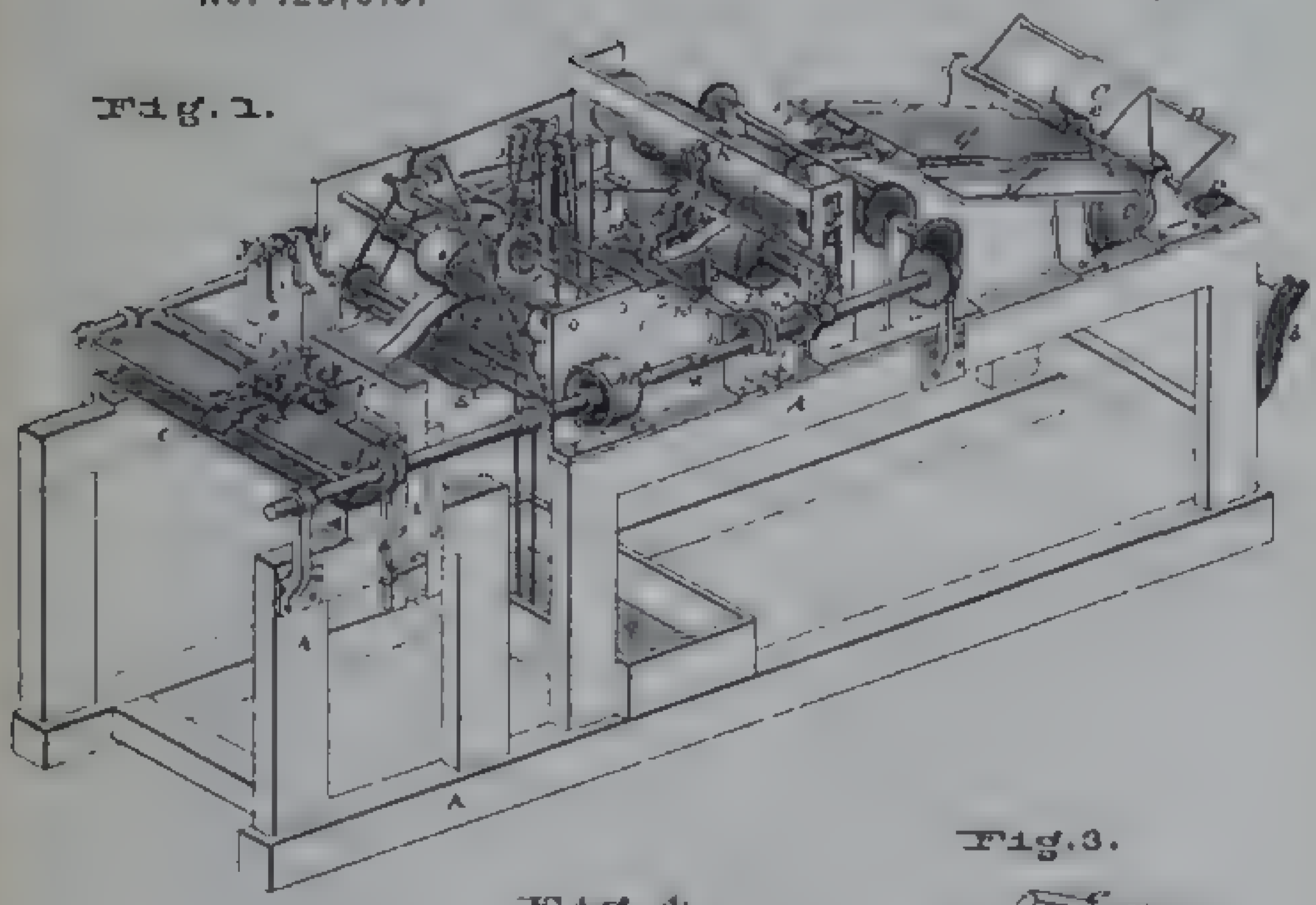


Fig. 2.

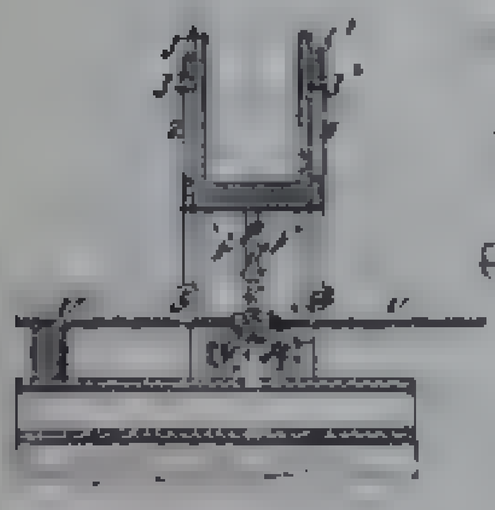


Fig. 4.

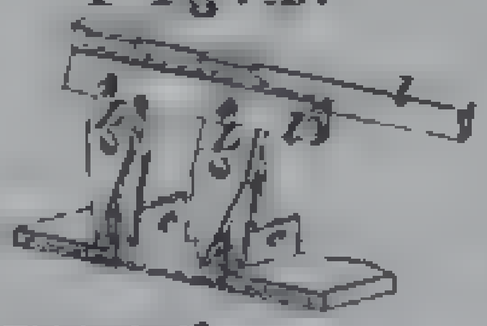


Fig. 5

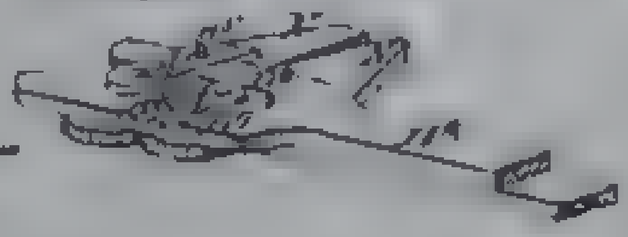


Fig. 3.

Attest.

Walter Allen

Inventor.

George Guild

By Knight Bros Attys.

123,013

UNITED STATES PATENT OFFICE.

GEORGE GUILD, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIMSELF AND JAMES GILLIES, OF SAME PLACE.

IMPROVEMENT IN PAPER-BAG MACHINES.

Specification forming part of Letters Patent No. 123,013, dated January 23, 1872.

I, GEORGE GUILD, of the city and county of St. Louis and State of Missouri, have invented a certain Improved Paper-Bag Machine, of which the following is a specification:

Nature and Object of the Invention.

My invention belongs to that class of paper-bag machines in which the paper is furnished in rolls and discharged in form of bags ready hemmed for use. My invention consists, first, in a peculiar construction of folder having three removable plates sliding on a table over which the paper passes—different sizes of plates being used for different-sized bags; second, in the combination and arrangement of a pair of toothed rollers, the upper grooved, and a fork cooperating therewith to receive the paper as preliminarily folded, and to present it in same to the cutting devices; third, in automatic jaws or fingers by which the upturned edges of the paper are alternately turned outward and inward preparatory to pasting; fourth, in certain novel devices whereby the paper is doubled together at its mid-length and the bottom formed, the latter being creased inward upon each side by a thin roller so as to open out into a flat bottomed bag, and the form is retained while the cut and pasted bag is being moved down by the former and drawn down by the discharging rolls.

Description of the Drawing.

Figure 1 is a perspective view of my machine. Fig. 2 is a vertical section through the "former" and the pressure and discharging rolls. Fig. 3 is a perspective view of the folder, the top plate being removed and turned up to show its under side. Fig. 4 is an enlarged perspective view of the scissors, by which the upturned edge of the paper is nicked. Fig. 5 is an enlarged perspective view of the fold-ing jaws. Fig. 6, Sheet 2, is a longitudinal section of the machine as represented in Fig. 1. Fig. 7 is a transverse section of the folder on the line 7, Fig. 6. The line 6 in Fig. 7 indicates the plane of section shown in Fig. 6. Fig. 8 is a bottom view of the forming plunger. Fig. 9 is a perspective view of a bag blank, as severed, the dotted lines indicating the position of the bottom creases, next formed. Fig. 10 is an end view of the bag as it leaves the "former." Fig. 11 is a bottom view of the bag as opened in use.

General Description.

A is a rectangular frame, upon which the working parts are supported. B is a removable drum carrying a roll of paper, C, and having journal bearings in brackets *b*. The paper passes upward from the drum and over a roller, D, and beneath a steel roller, E, which, being made narrower than the strip of paper, causes the edges of the latter to turn upward, said edges being still further curled in the mouth of the folder, and a narrow portion of the edge turned directly upward. The folder consists of two side plates, F F', and a top plate, G. The side plates are held in position by steady-pins *f*, which pass through holes in the table H. The side plates have bevel rabbets *f'* on the under sides extending to the outer edge, the thin plate of metal above the rabbet being beveled at the front end to partly form the sides of the mouth *f*, the rabbets becoming more and more contracted vertically as they extend backward so as to fold the paper flatly while passing through. The top plate G has two grooved grooves, *g*, on the under side, the grooves being larger at the mouth and contracting backward; between the grooves there being a rib, *g'*, which nearly touches the table, and causes the narrow edges of the paper to turn upward and to issue from the rear edge of the folder in that position. The top plate G is held in position by its own weight and by steady-pins *g'* passing through the plates F F' and the table H. The plates of the folder may be changed to suit bags of different widths. The paper after passing through the folder passes between two feed-rolls, I I', the roll I having a circumferential groove, *i*, to admit the upturned edges of the paper. The roller I is journaled in gravitating boxes J so as to always press with equal force upon the paper whatever the thickness of the latter may be. K is a depending fork which holds the edges of the paper in position for proper presentation to the cutting shears or scissors L L', by which the edges of the paper are cut transversely at the proper length and at the ends of the bag blank. These shears have each one fixed jaw or blade attached to a bar, *l*, the other blades being

(6.)

E. GUNTHER.

Lozenge

Machines.

No. 122,602. Patented Jan. 9, 1872.

3 Sheets—Sheet 1.

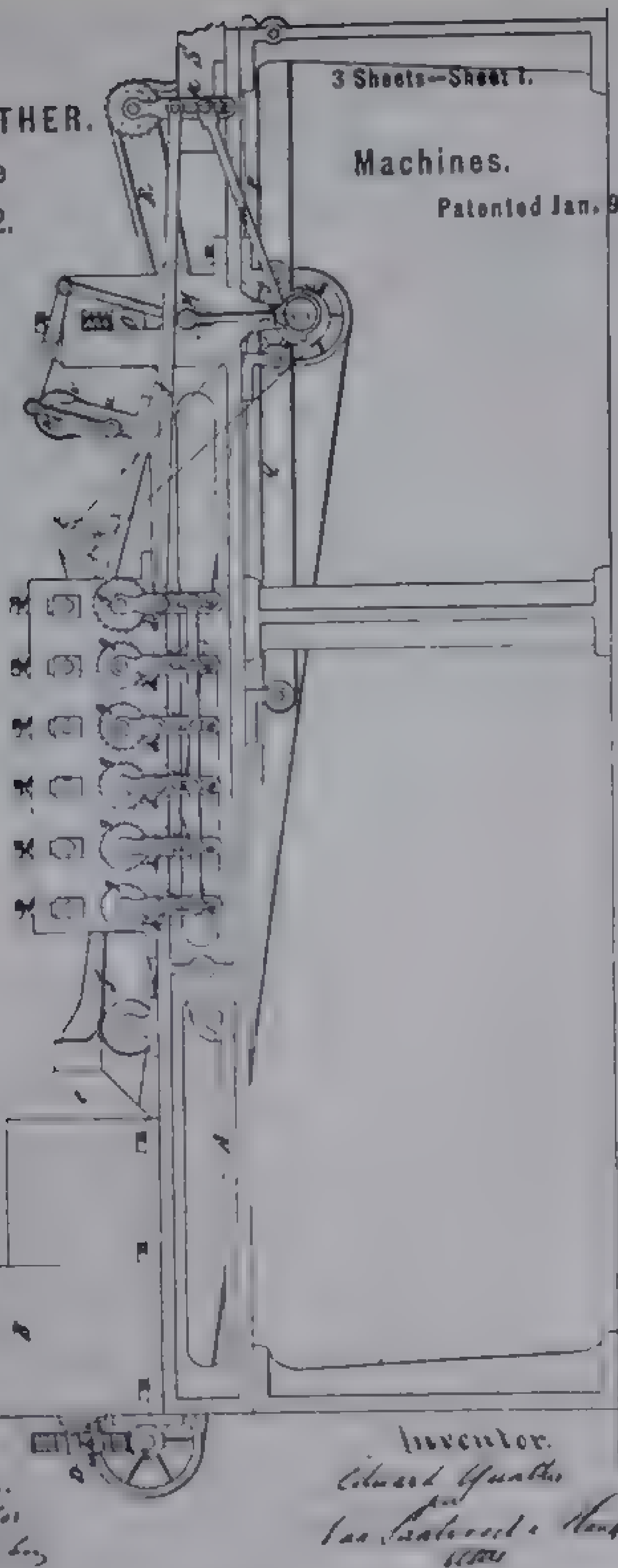


Fig 1

Witnesses.
Fred. Gilbert
C. F. Stanley & Co

Inventor.
Edward Gunther
per
Van Santvoord & Hopkins
Attys

122,602

UNITED STATES PATENT OFFICE.

EDWARD GÜNTHER, OF NEW YORK, N. Y.

IMPROVEMENT IN LOZENGE-MACHINES.

Specification forming part of Letters Patent No. 122,602, dated January 9, 1872

To all whom it may concern:

Be it known that I, EDWARD GÜNTHER, of the city, county, and State of New York, have invented a new and Improved Lozenge-Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a side view of this invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a transverse section of the pruting mechanism detached, on a larger scale than the previous figure. Fig. 4 is a plan or top view of the cutting mechanism detached. Fig. 5 is a transverse section of one of the cutters.

Similar letters indicate corresponding parts.

This invention relates to a lozenge-machine in which the dough is mixed in a suitable box by a series of hook-shaped knives set spirally on a shaft, to which a slow and powerful motion is imparted by a worm and worm-wheel. On this shaft is also mounted a feed screw, which forces the mixed dough out through a spout and between a series of pressure rollers, which gradually compress the same into a sheet of the required thickness, which is carried through between the cutters. The feed motion of the pressure-rollers is adjustable, and the cutters are constructed in the shape of truncated cones, in such a form that the lozenges after having been cut drop readily through the same. With the pressure-rollers is combined a revolving sieve to spread flour over the surface of an apron which is carried past the pressing rollers, so as to prevent the same from adhering to the dough.

In the drawing, the letter A designates a frame, on one end of which is secured a box, B, by preference made in the form of a cylinder, with a feed-opening, C. Through this box extends a shaft, D, which receives a slow and powerful motion by a worm, *a*, and worm wheel *b*, and which carries a series of mixing hooks, *c*, set spirally in the same, as shown. On said shaft is also secured a spiral feeder, *d*, which forces the mixed dough out through the conical spout *e*. On leaving this spout the dough is received on an endless apron, *f*, which conducts the same between a series of pressing rollers, F, which are arranged in pairs, each succeeding pair being set somewhat closer than the preceding one, so that the dough is gradually compressed to a sheet of the requisite thickness. To prevent the dough from passing through the lower pressing-rollers the spaces between them are filled out, as shown in Fig. 2.

Each pair of pressing-rollers is geared together, and to the shaft of one roller in each pair is secured a ratchet-wheel, *g*, (see Fig. 1,) which is acted upon by a pawl, *h*, each pawl being secured to one of a series of levers, *i*, which are connected to each other, and one of which connects, by a rod, *j*, with a lever, *k*, to which an oscillating motion is imparted by an eccentric, *l*, and rod, *m*. The levers *k* and *i* are provided with oblong slots *n*, so that their connecting-rods can be adjusted toward and from their fulcrums, and thereby the motion of the several rollers can be gauged so as to draw out the dough to the required thickness, notwithstanding all the rollers derive their motion from one and the same eccentric; for it will be readily understood that by gradually increasing the motion of the succeeding pairs of pressing rollers the dough is not only compressed but also drawn out. Beneath the lower series of pressing rollers and in contact therewith runs an endless apron, *o*, which is stretched over rollers *p*, and which extends under a cylindrical sieve, *q*, containing flour of starch or other suitable material. The flour which is deposited from this sieve on the apron is brought in contact with the pressing rollers, and thereby the dough is prevented from adhering to said rollers. As the dough leaves the last pair of pressing rollers it passes upon an endless apron, *r*, by which it is carried through under the stamping die *s*, and before being exposed to the action of this die the surface of the dough is cleaned by a revolving brush, *t*. The stamping die *s* moves up and down between slotted stand-irons *u* (see Fig. 1,) motion being imparted to it by an eccentric and working-beam, or by any other suitable means, and said die is made square or polygonal, and it receives a partial revolving motion on each stroke, so that on each downward motion a fresh surface thereof is brought in contact with the dough, while on each upward

2 Sheets--Sheet 2.

HENRY J. HALL. Improvement in Machines for making Cigars.

No. 123,014. Patented Jan. 23, 1872.

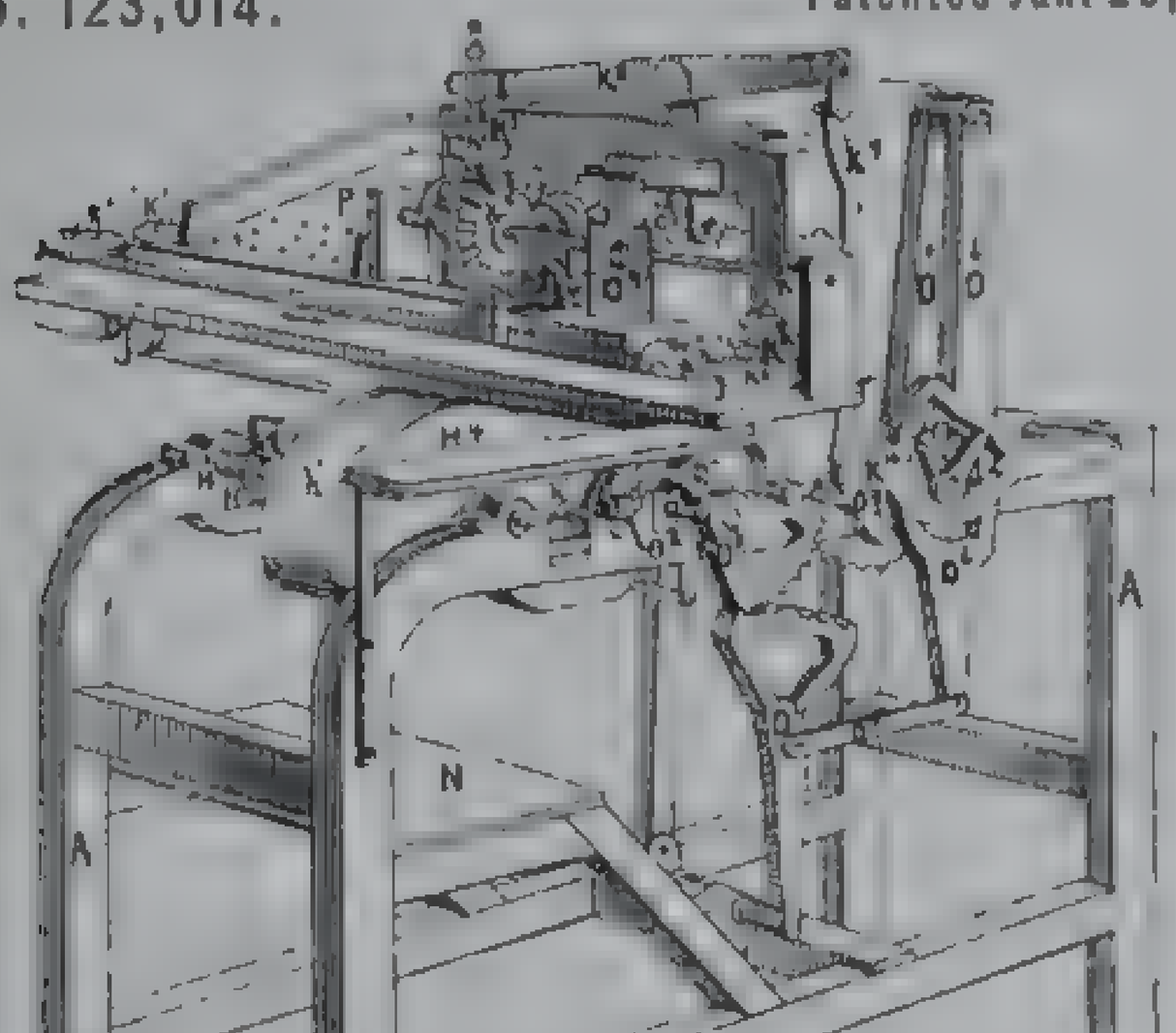


Fig 1

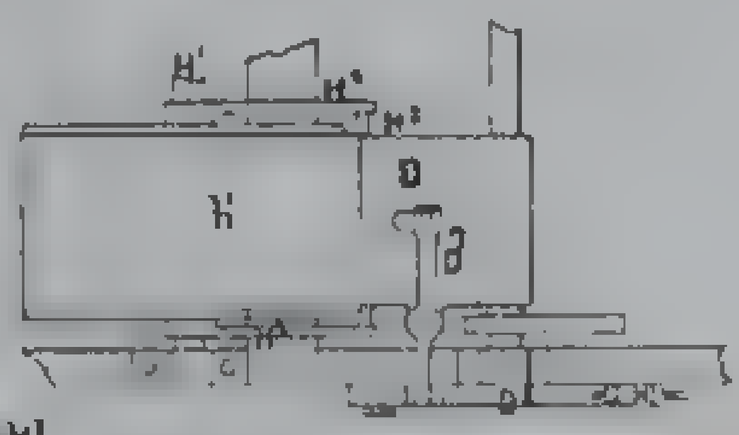


Fig 8

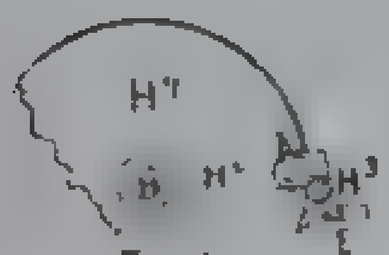


Fig 6

Fig 7

WITNESSES

Frank G Parker
Frank H Antler

INVENTOR

Henry J Hall

123,014

UNITED STATES PATENT OFFICE.

HENRY J. HALL, OF BROOKLINE, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR MAKING CIGARS.

Specification forming part of Letters Patent No. 123,014, dated January 23, 1872

To all whom it may concern:

Be it known that I, HENRY J. HALL, of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Making Cigars, of which the following is a specification:

The Nature of the Invention.

The nature of my invention consists, first, in cutting the loose tobacco into the form of a cigar before the binder is put on, and, by the same operation continued, pressing it into a mold; second, in so arranging the mold and its operating-gear in connection with the rolling-up belt that the tobacco in bunch may be forced from the mold directly into the fold of the rolling-up belt, so that the bunch is kept constantly under pressure; third, in hanging the mold upon pivots so that it may swing out from under the cutting plunger and take position opposite the recess in the form upon which the rolling up belt runs, in which position the action of the ejecting plunger takes place, forcing the bunch into the rolling up belt; fourth, in arranging with the swinging mold a follower which shall serve to keep the tobacco under pressure until the rolling-up belt has complete hold of it; fifth, in arranging the rolling-up belt upon a stationary drum about which the fold of the belt is made to pass; sixth, in the device of a step-cam for the purpose of giving a motion, with varying velocity, to the rolling up device.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of my invention. Fig. 2 is a plan of the same. Fig. 3 is a section of the same. Fig. 4 is a plan, showing the cutting-die. Fig. 5 is an elevation, showing the device for giving a variable motion to the rolling-up device. Figs. 6 and 7 are elevations, showing the rolling-up device. Fig. 8 is a plan, showing the rolling-up device in connection with the mold and a part of the device for operating the follower within the mold.

General Description.

A is the frame to which the principal parts of my machine are attached. K K, Figs. 1, 2, and 3 are feeding-in belts, and they serve to form the two vertical walls of the feeding in channel, of which the belt L forms the bottom. All these belts are driven in the direction indicated by the arrow, Fig. 1, with an intermittent motion, the effect being produced by the cam lever K^{10}, link K^9, lever K^8, rack K^7, and pinion and ratchet K^6, Fig. 1, the motion being transmitted through the gears k, k^1, k^2, &c., Fig. 1. The cutting-die C is made to cut the tobacco—that is, form it into a bunch in the shape represented in Fig. 4—so that the bunch, as it comes from the machine, is a good form for a cigar, the ends being tapering. The cutting-die C^1 also serves as a plunger or punch to force the tobacco into the mold D. The mold swings on a shaft, D^2, operated by the cam gears D^1 D^3, link D^5, lever D^6, and a cam on the shaft C, by which action the bunch is carried to the recess *h*, Figs. 1, 3, and 7, in the stationary drum H^4. The bunch is forced out of the mold and into the recess *h* by means of an ejecting plunger, D^4, Fig. 3, which is operated by the lever D^7 and link D^8, Fig. 8, the lever D^9, and a cam on the shaft C, Fig. 1. As the rolling-up belt *h'* is within the recess *h* it receives the bunch of tobacco. This rolling up belt or apron *h'* is made fast at its two ends to the fixed drum H^4. This belt is made sufficiently long, so that a fold may be formed in it to take the bunch of tobacco, the fold being formed first in the recess *h*, at which place it takes the bunch of tobacco, as shown in Fig. 6. After removing the tobacco at *h* the fold is made to traverse the drum H^4, carrying with it tobacco *c*, as shown in Fig. 7, rolling it and putting on the binders in its passage, and finally delivering it on the platform N. The shaft H^1, Figs. 1, 2, 3, 6, and 7, carrying the arms H^3 and rolling up roller H^5, is operated by the rack-rod F^4, which meshes with the pinion H on a shaft H^2. The rack-rod F^4 terminates in a peculiarly formed head, F^5, shown in Fig. 3, and in reverse in Fig. 5. F is a stepped cam formed in a series of steps, *f f f*, which operate against a similar series of steps on the head F^5 of the rack-rod F^4. From the form of the cam F and the tooth like parts of the head F^5 it will be understood that, as the first step *f* begins to act, the motion of the rod F^4, and consequently the rolling-up roll H^5, will be slow. As this rolling up roll H^5 is at this time in the position represented in Fig. 6—that is,

C. H. Henkel. Extension Table.

No. 122,946. Patented Jan. 23, 1872.

Fig 1

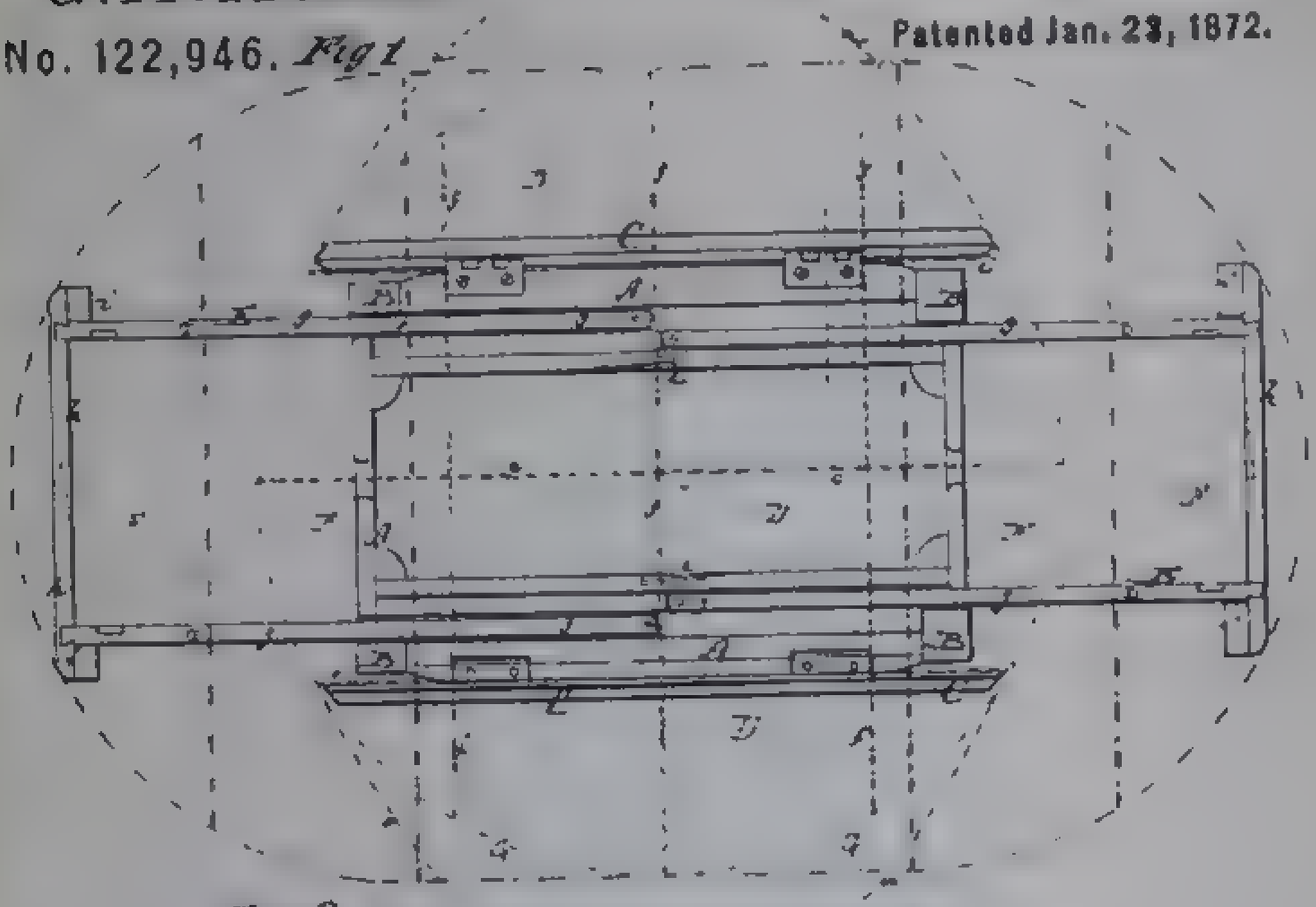


Fig 2

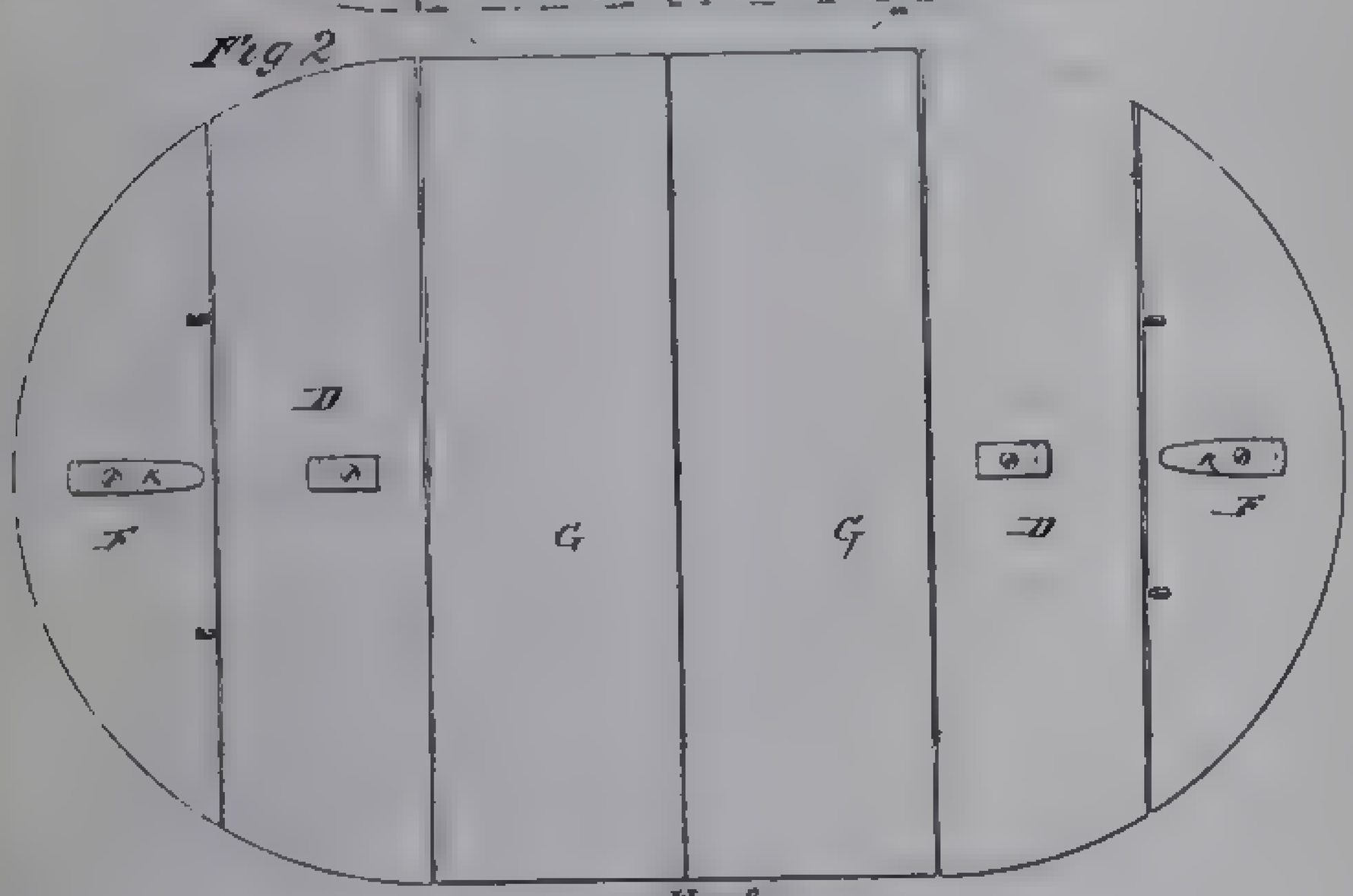
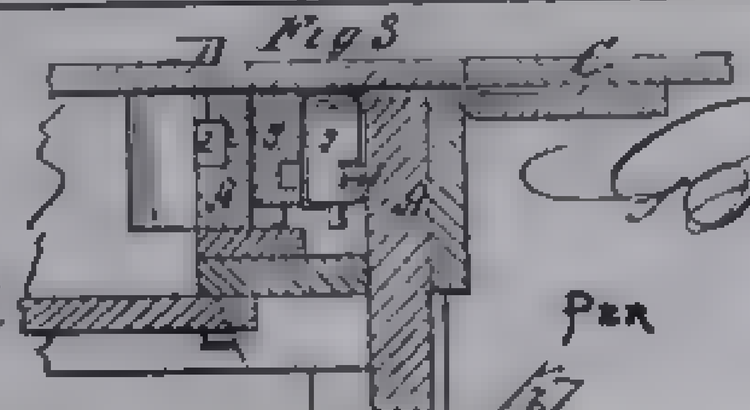


Fig 3



Witnesses:

E. Hoffe

Gustave Dieterich

Inventor:

C. H. Henkel

Per Munn & Co

Attorneys.

122,946

UNITED STATES PATENT OFFICE.

GEORGE H. HENKEL, OF GERMANTOWN, OHIO.

IMPROVEMENT IN EXTENSION TABLES.

Specification forming part of Letters Patent No. 122,946, dated January 23, 1872.

To all whom it may concern:

Be it known that I, GEORGE H. HENKEL, of Germantown, in the county of Montgomery and State of Ohio, have invented a new and improved Extension Table; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Fig. 1 represents a plan or top view of my improved extension table, showing the leaves in dotted lines. Fig. 2 is a bottom view of the leaves. Fig. 3 is a detail vertical transverse section of the table.

Similar letters of reference indicate corresponding parts.

This invention relates to a new extension drop-leaf table, which can be used either with a circular, oval, or extended top, as may be desired. The invention consists in a new manner of fastening the leaves and in a novel method of adjusting and utilizing the several parts, as hereinafter more fully described.

A in the drawing represents the main frame of the table, supported on the four legs B B, and made of substantial construction. To the sides of the frame A are hinged leaves C C, shown in Fig. 3, and by the dotted line *a* in Fig. 1. These leaves can be let down or held up horizontally by suitable braces *b*, and serve, together with the central leaves D D, to constitute an oval table, provided the said leaves D are placed with their edges parallel to the sides of the table, as shown by the dotted lines *c c* in Fig. 1. The leaves D are in this position locked to the frame A by means of hooks *d* projecting from the bottoms of the leaves into slanting recesses *e* at the sides of the frame A. In place of the folding leaves C the frame may be finished at the sides like a card table. When the leaves D are turned at right angles to their stated first position, as in Fig. 2, and by lines *f* in Fig. 1, they can be used as part of a circular or extension table. E E are the extension frames. Each of them consists of two horizontal bars, *g g*, one end cross-piece, *h*, and two legs, *i i*. The bars *g* slide in the frame A close to the side pieces of the same, and are grooved to receive a guide and stop-pin, *j*, as in Fig. 3.

When a circular table is to be produced the segmental leaves F are placed upon the ends of the frames E, fitted thereto by upright or inclined dowels, and locked to notches in the end pieces *k* by pivoted latches K. The inner leaves D are turned at right angles and the frames E drawn in until the leaves D and F are in proper contact. The circular table shown in Fig. 1 is thus obtained.

For an extension table the same leaves D and F are used, together with a suitable number of extension leaves G interposed between them.

The box of the table-body can be used as a receptacle for napkins, table cloths, and other articles.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

The leaves D, so constructed that when arranged at right angles with their position in an extension table they combine with the leaves C to form an oval table, substantially as described.

GEO. H. HENKEL.

Witnesses:

FRANK CUNNINGHAM,

J. W. SHORTS.

S. HUSSEY.

Improvement in Hide and Fulling Mills.

No. 125,135. Patented April 2, 1872.

Fig 1

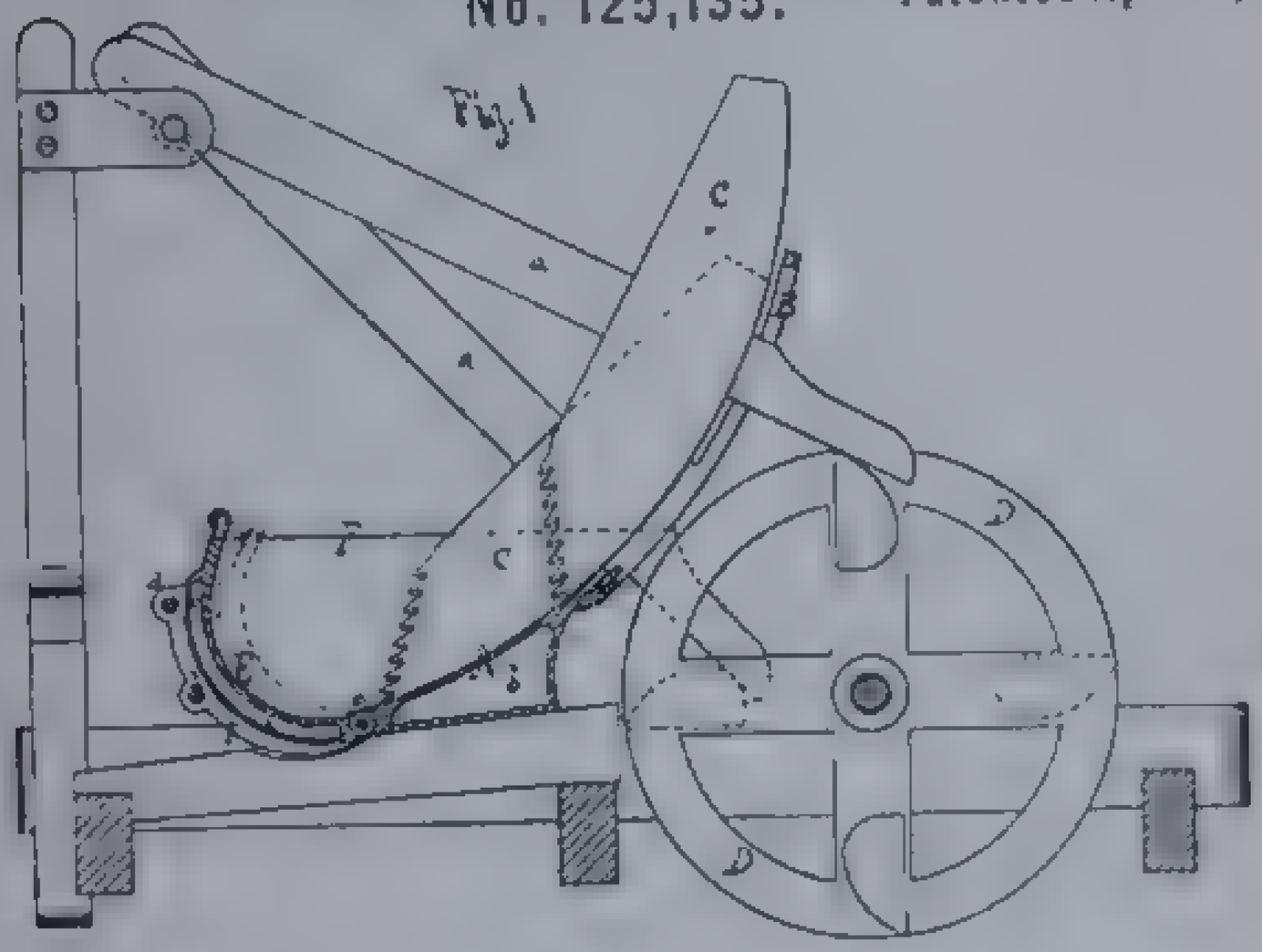
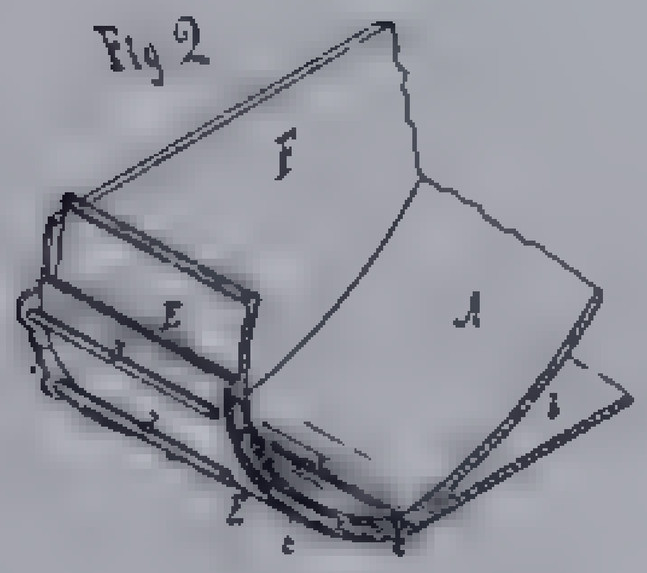


Fig 2



Witnesses

F. R. Drake

C. H. Hardward

Sylvanus Hussey
Inventor, By
of Burke, Fraser & Osgood
Attys.

125,133

UNITED STATES PATENT OFFICE.

SYLVANUS HUSSEY, OF GOWANDA, NEW YORK, ASSIGNOR TO HIMSELF AND SELLEN, ADAMS & CO., OF SAME PLACE.

IMPROVEMENT IN HIDE AND FULLING MILLS.

Specification forming part of Letters Patent No. 12[illegible]3, dated April 2, 1872

SPECIFICATION.

I, SYLVANUS HUSSEY, of the town of Gowanda, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in a Combined "Fulling" and Hide Mill, of which the following is a specification:

Nature of the Invention.

The object of my invention is to produce a mill that will "full" cloth and also soften hides; and the invention consists in making the bed and back in two pieces, hinged or otherwise connected, and also in combining steam-chambers with the bed and back pieces. It furthermore consists in the form or shape of the back piece, and in making it adjustable, as hereinafter fully set forth.

General Description.

In the drawing, Figure 1 is an elevation in cross-section. Fig. 2 is a perspective, partly in section, of the back and bottom pieces.

A is the bed piece; B, the curved slotted guides of the levers *a a* of the beaters C C. The slotted guides are provided with rubber packing or cushions to deaden the fall of the levers when there is not enough cloth in the mill to receive the full stroke of the beaters. D is the cam wheel which operates the beaters. *b* represents a chamber, which is cast or formed in the bed piece, making part of the same, to which steam is to be introduced through suitable pipes. To the end of this bed piece is hinged or otherwise arranged a curved adjustable back, E, having also cast or formed in its back or rear a steam chamber, *c*, the object of both being to apply heat through the iron bed or back piece to assist the beaters in fulling the cloth or softening the hides. Making the bed and back pieces in two parts produces an important effect—viz., to permit of the adjustment of the back, which is accomplished by hinging it to the bed piece, (shown at *e*,) and by back bolts *d d*, which pass through the side pieces F of the frame, which hold the back at any angle desired. This adjustment allows the operator to turn the cloth or hides, by the action of the beaters, faster or slower, as they may require, and to turn hides and cloths of different grades as regularly and evenly as though they were all alike. Heavy cloths and hard flint hides require, in order to be worked equally well, the back of the mill to be at a different pitch or angle than light cloths or soft hides. The shape or peculiar curve of this adjustable back E is also a very important feature of my invention, and it has been a work of great difficulty to arrive at the right form, so that the cloth or hides will gradually and regularly, by the action of the beaters, be turned over and over, so that each and every part of the cloth or hides will, in turn, receive the strokes. A slight change in the curve or shape of the back would result either in the contents of the mill not turning over at all, or, after turning a time, they would wedge fast in the bottom of the mill, which would necessitate stopping it and readjusting its contents. The peculiar form of this back piece E and its adjustment to the bed piece A cause the beaters to turn the contents of the mill completely over with a few or many strokes, at the option of the operator. Another great advantage of my mill is, that it fulls cloth cleaner than any other with which I am acquainted. It is also self-acting, requiring neither tending nor watching. Its use for softening hides will be found very important, as they can be manipulated and softened better and in a much shorter space of time than with ordinary mills, besides doing away entirely with hand labor. When used for this purpose, iron pins will be inserted in the heads of the beaters.

The entire mill will be made of metal, which I believe has never before been employed with a fulling mill, and which will greatly add to its strength and durability.

What I claim is—

1. I claim the hinged adjustable back, provided with the steam-chamber *c*, arranged and operating, in connection with the bed piece A and beaters C C, substantially as described, for the purpose set forth.

2. I claim the bed piece A, provided with the heating-chamber *b*, in combination with the hinged back E, substantially as and for the purpose set forth.

3. I claim the hinged curved back E, provided with the steam chamber *c*, in combina

HENRY JAMES.

Improvement in Folding Chairs.

No. 125,195. Patented April 2, 1872.

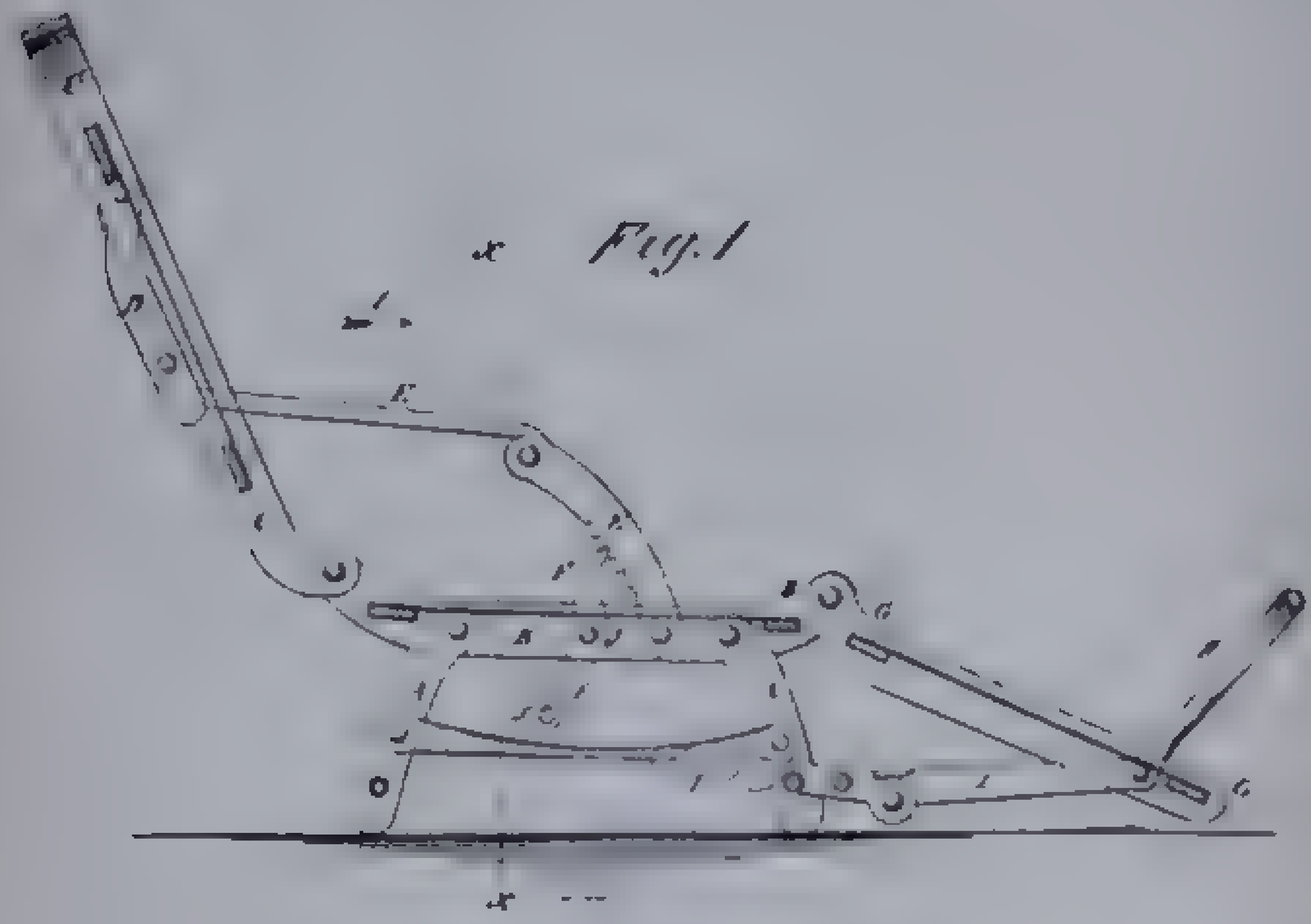


Fig. 1

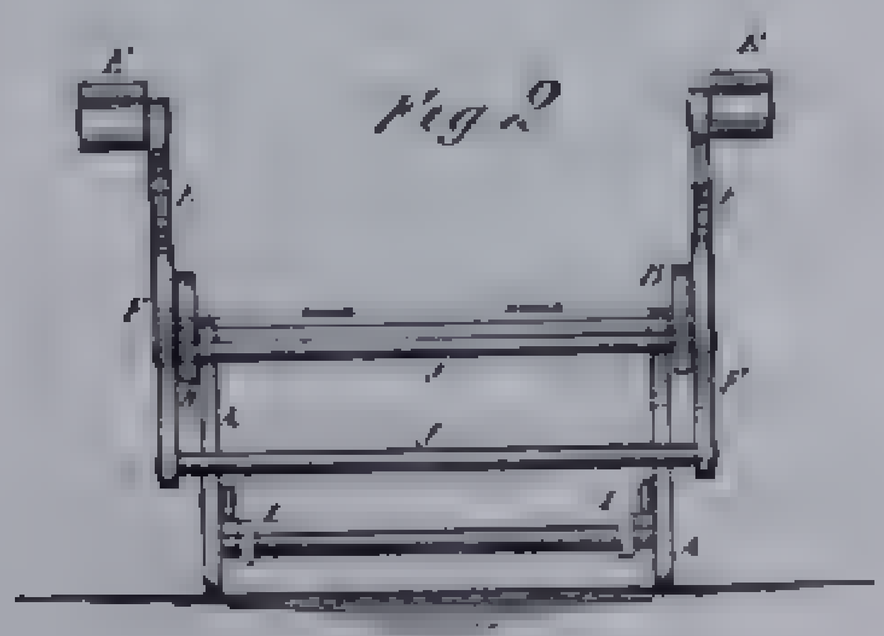


Fig. 2

Witnesses:

A. W. Almquist

Geo. H. Mabee

Inventor:

H. James

Per Munn & Co

Attorneys.

125,103

UNITED STATES PATENT OFFICE.

HENRY JAMES, OF NORTH ADAMS, MASSACHUSETTS.

IMPROVEMENT IN FOLDING-CHAIRS.

Specification forming part of Letters Patent No. 125,125, dated April 2, 1872.

Specification describing a new and improved Folding Chair, invented by HENRY JAMES, of North Adams, in the county of Berkshire and State of Massachusetts.

Figure 1 is a detail vertical longitudinal section of my improved folding chair. Fig. 2 is a detail vertical section of the same taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention is an improvement in folding chairs; and it consists in the construction and combination of various parts of the chair, as hereinafter more fully described.

A are the legs or main frame. B is the seat frame. C is the back. D are the legs that support the back when turned down to form a bed. E are the jointed arms. F are the pawls that support the arms and back. G is the front or extension frame, which is provided with the foot rest H, about the construction of all which parts there is nothing new. To the forward part of the front frame G are pivoted bars I, which may be made in one piece or jointed, as shown in Fig. 1. When the bars I are made jointed the joints should be made with stops, as shown in Fig. 1, so as to hold the said bars rigid when extended. Upon the under side of the free ends of the bars I are formed notches to catch upon the front cross-bar of the legs or frame A, so as to support the front or extension frame G securely at any desired elevation. I prefer to make the bars I jointed, as shown in Fig. 1, as it enables them to be folded upon the frame G, when it is desired to turn said frame G back upon the seat B to adjust the chair as an easy-chair. The bars I are connected by a round to keep them in proper relative position and to cause them to move together when being adjusted. The pawls F are connected by one or more rounds or rods, J, to cause them to move together, so that they may be both operated together from one side of the chair to engage or disengage them from the notches of the forward parts of the jointed arms E.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of a folding chair, with extension frame G, provided with pivoted and notched bars I, of frame A, seat B, and connected pawls F J F, as and for the purpose described.

HENRY JAMES.

Witnesses:
LEWIS KNICKERBOCKER,
JARVIS ROCKWELL.

M. KELLY.

Improvement in Earth Scrapers.

No. 125,199. Patented April 2, 1872.

Fig. 1.

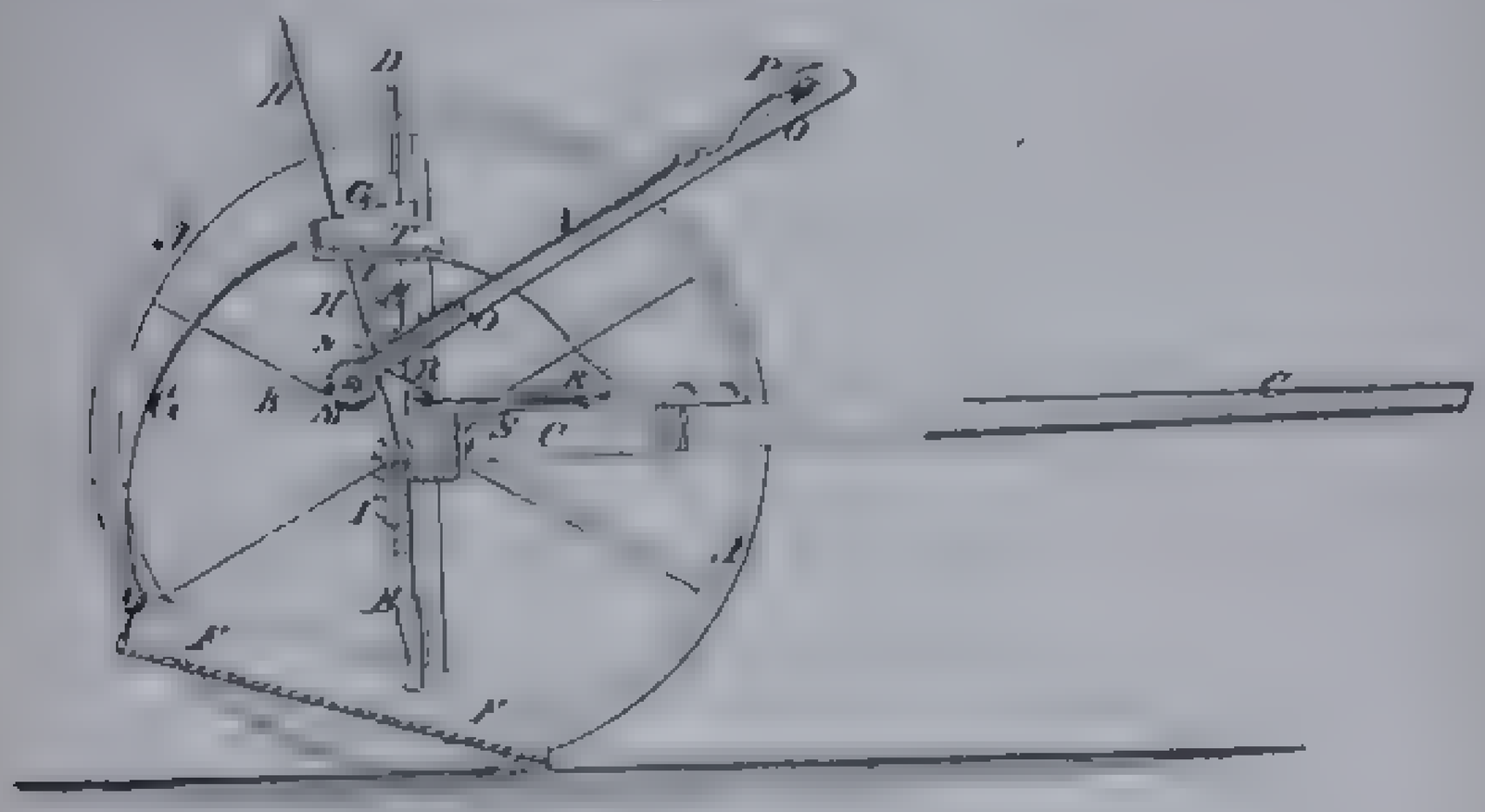
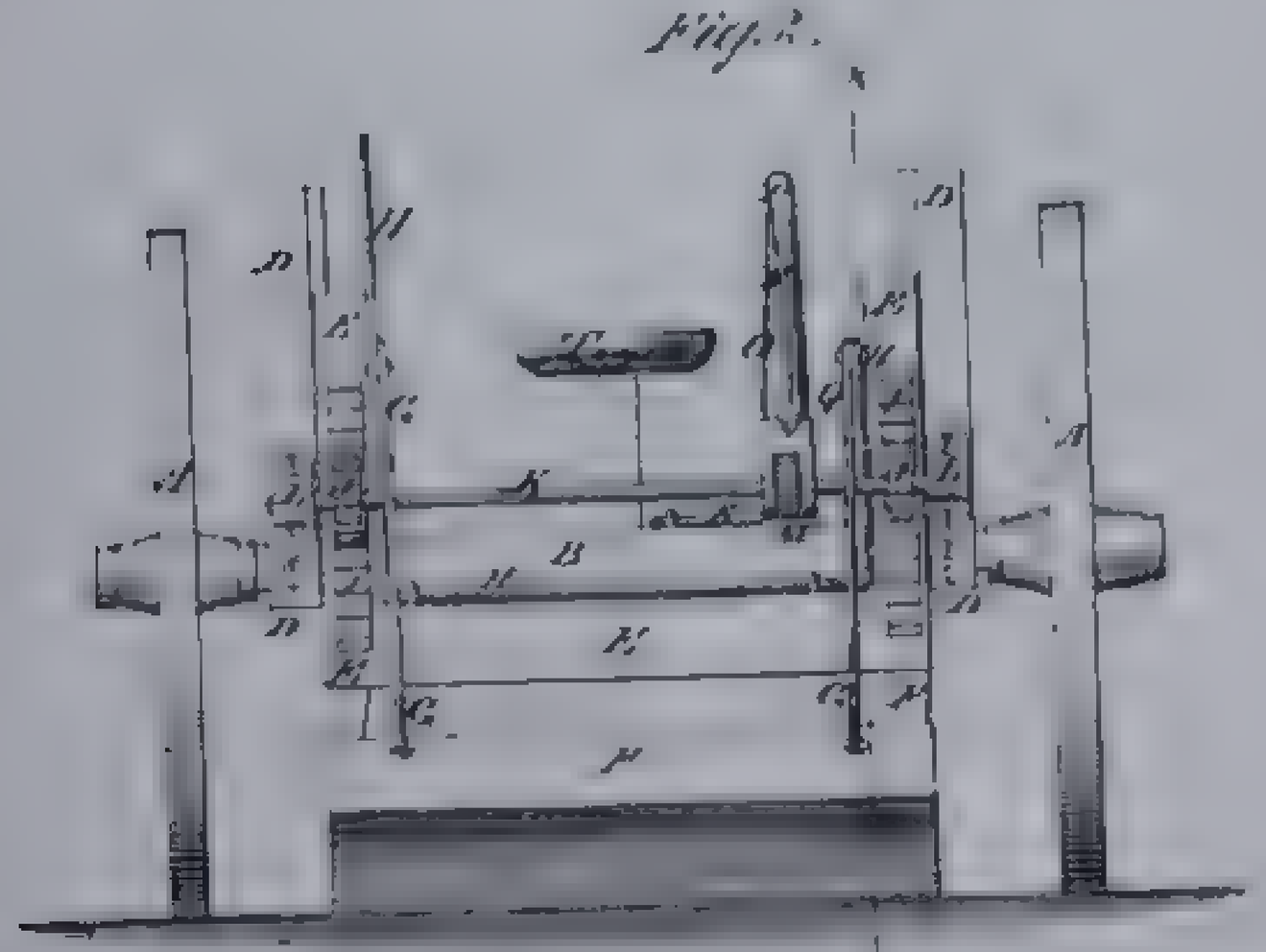


Fig. 2.



Witnesses:

Robt. Burnett

Alex. H. Mabee

Inventor:

M. Kelly

Per Munn & Co

Attorneys.

123,109

UNITED STATES PATENT OFFICE.

MICHAEL KELLY, OF FAIRFIELD, VERMONT.

IMPROVEMENT IN EARTH-SCRAPERS.

Specification forming part of Letters Patent No. 123,[illegible], dated April 2, 1872

Specification describing a new and Improved Earth Scraper, invented by MICHAEL KELLY, of Fairfield, in the county of Franklin and State of Vermont.

Figure 1 is a detail longitudinal section of my improved scraper taken through the line *x x*, Fig. 2. Fig. 2 is a rear view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved earth-scraper for grading, road making, &c., which shall be simple in construction, convenient in use, and effective in operation, enabling more work to be done with less labor to man and team than when an ordinary scraper is used; and it consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A are the wheels, which revolve upon the journals of the axle B, to which the tongue C is rigidly attached. To the rear side of the axle B, near its ends, are securely and rigidly attached two uprights, D, the inner edges of which are tongued or grooved to adapt them to serve as ways for the grooved or tongued edges of the frame or gate E in its upward and downward movements. The lower ends of the side bars of the gate or frame E are pivoted to the side flanges of the scraper F near their forward ends. To the rear flange of the scraper F, near its ends, are pivoted the lower ends of the curved rods or bars G, which curve upward and forward, and are pivoted to the ends of the rod or bar H, which is bent twice at right angles, and the middle or horizontal part of which is pivoted to the cross-bar of the frame or gate E. The end of one or both the rods G project in front of the rod H, and is bent at right angles to strike against the forward side of the side bars of the gate or frame E, to support the rear end of the scraper F when in working position, and when being raised and lowered. The left end of the rod H projects above the rod G, as shown in Figs. 1 and 2, to serve as a lever for raising the rear end of the scraper to dump the load. To the rear sides of the side bars of the gate or frame E are attached rack-bars I, the teeth of which mesh into the teeth of the gear-wheels J attached to the shaft K, the ends of which revolve in bearings L attached to the rear side of the uprights D. To the shaft K, near its right hand end, is attached a ratchet-wheel, M, upon the teeth of which the pawl N takes hold. The pawl N extends along and is connected with the lever O, and to its upper end is pivoted the end of a short lever, P, which is pivoted to the said lever O, so that by pressing the free end of the lever P toward the lever O the pawl N will be withdrawn from the ratchet-wheel M, allowing the shaft K to revolve freely, so that the scraper may drop to the ground by its own weight. The free end of the lever P is held out from the lever O, to hold the engaging end of the pawl M in contact with the teeth of the ratchet-wheel M by a spring, Q, as shown in Fig. 1. The lower end of the lever O is pivoted to and rides upon the shaft K. R is a lever pawl, one end of which is so arranged as to bear against the teeth of the ratchet wheel M and hold the shaft K securely while the lever O is moved back to take a new hold. The other end of the lever pawl R projects into such a position, that it may be conveniently reached and operated by the driver with his foot. The free end of the lever pawl R is held up, holding its engaging end against the teeth of the ratchet-wheel M, by a spring, S, as shown in Fig. 1. T is the driver's seat, which is supported from the axle B or tongue C, as may be convenient. By this construction the scraper F is raised, either when empty or loaded, for convenience in passing from place to place, by simply working the lever O backward and forward. The scraper F is lowered into working position by pressing down the free end of the lever R with the foot and the free end of the lever P with the hand. The scraper F is dumped by drawing the projecting upper end of the rod or lever H forward.

Having thus described my invention, I claim as new and desire to secure by Letters Patent —

The combination of the uprights D, gate or frame E, scraper F, rods G and H, racks I, gear-wheels J, shaft K, ratchet-wheel M, pawl N P Q, lever O and lever-pawl R S with each other and with the axle B, wheels A, and tongue C, substantially as herein shown and described, and for the purpose set forth.

MICHAEL KELLY.

Witnesses:

F. W. MCGLEFFREY,

E. A. SOWLES

(91.) E. KING.

No. 122,527.

Improvement in Clothes Wringers.

Patented Jan. 9, 1872

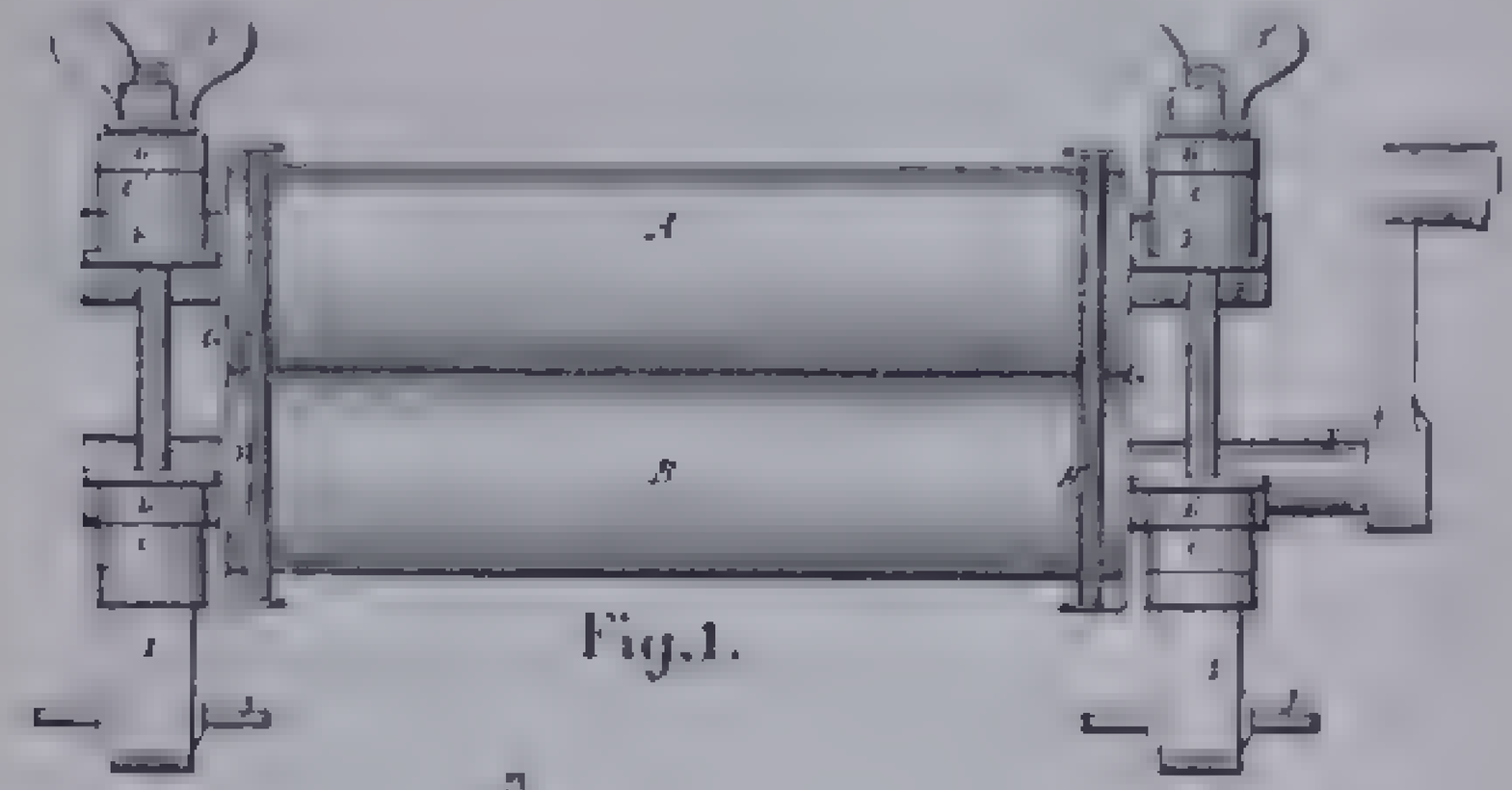


Fig. 1.

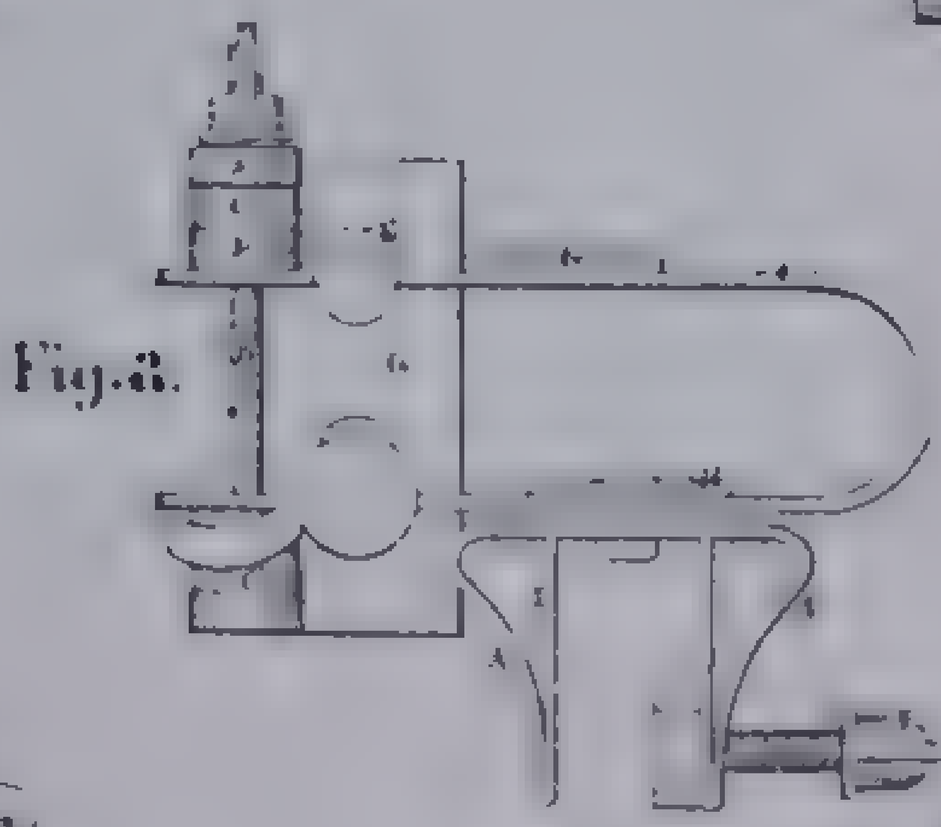


Fig. 2.

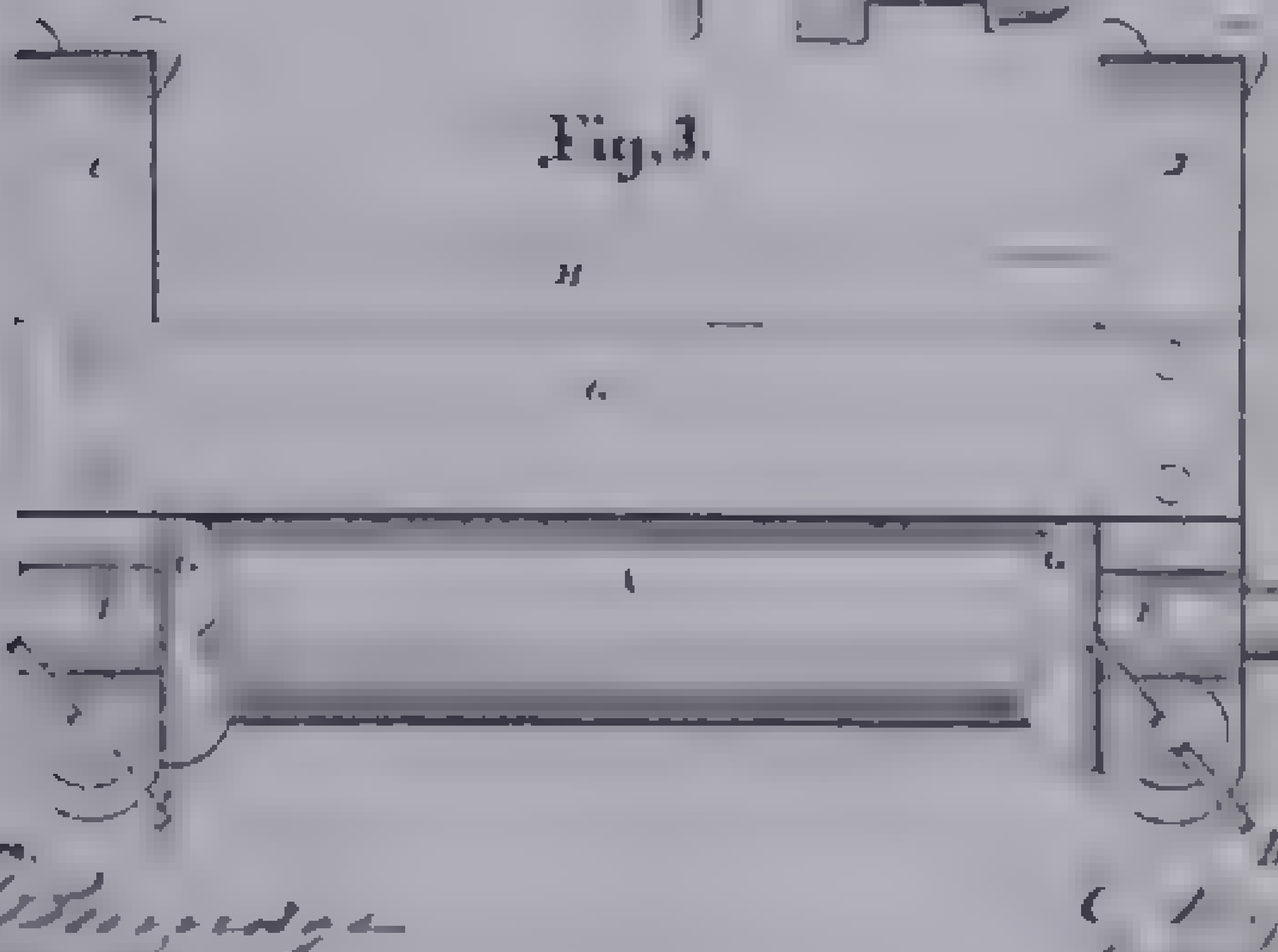


Fig. 3.

Witnesses.

Inventor.

123,527

UNITED STATES PATENT OFFICE.

EDWIN KING, OF DUNKIRK, NEW YORK.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 123,527, dated January 9, 1872

To all whom it may concern:

Be it known that I, EDWIN KING, of Dunkirk, in the county of Chautauqua and State of New York, have invented a new and Improved Clothes Wringer; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawing making part of the same.

SPECIFICATION.

Figure 1 is a front view of the clothes wringer. Fig. 2 is a side view. Fig. 3 is a top view.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to a clothes wringer, and the object thereof is to construct the frame of the wringer of wrought iron instead of cast iron, thereby obtaining greater strength and lightness of the frame, and which is also less expensive than the ordinary cast iron frame. It also relates to the peculiar shape of the frame and the mode of its construction, whereby is obtained a neatness in appearance and facility of manufacture.

The machine is constructed as follows: A B, Fig. 1, are the rubber rollers which are or may be constructed in the ordinary way. C D are the ends of the frame, each of which consists of a single piece of thin steel iron bent to the shape shown in the end view, Fig. 2. Near each end is formed a journal seat, E, for the shafts of the rollers, and in which they have their bearings, as shown. The above-described ends are secured to each other by two plates or ties, G H, which are riveted thereto in the relation to each other and to the rollers, as shown in Fig. 3, in which it will be seen that the upper plate G is nearer the rollers than is the lower plate. I, Fig. 1, are clamps secured to the under side of the ends C D, as shown in Fig. 2, and where by the wringer is attached to the side of the tub by means of the set-screws J. Each of said clamps consists of a single piece of iron bent into the shape shown, of which the upright parts 1 are the ends, and the bows A' the parts near the middle, and which form braces for the upright pieces or ends 1. Through each of the extremities of the end C D is projected a bolt, K. On the bolt above and below the ends is the rubber collar or spring f'. Each end of said springs is held in a cup-washer L, whereby the springs are prevented from lateral expansion on being compressed by the set-screw I or by the rollers while the clothes are being passed through them. G are guide-plates whereby the clothes are prevented from passing beyond the ends of the rollers. H are guide-rollers, the purpose of which is to conduct the clothes away from the rollers.

As aforesaid, the advantages resulting from a clothes-wringer when constructed as above described, is that it is stronger than the ordinary wringer, as the frame is constructed entirely of wrought iron; hence it is not liable to break in the event of its being dropped or in case of any other accident. It is cheaper than a cast iron frame and more easily constructed and put together as the material consists simply of thick strap-iron which requires no forging to bring into the required shape, the several parts being simply cut of the proper length, which are then bent into shape and riveted together. It is neat in appearance and light to handle, and can be manufactured for less than wringers having a cast-iron frame.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The herein described clothes-wringer having the sides or ends C D, plates G H, and clamps I, made of wrought iron, and of the shape and in the manner, substantially as described, and for the purpose set forth.

2. In combination with the above I claim the spring f', cup-washers L, adjusting screws K, and ends C D of the frame, in the manner as and for the purpose set forth.

EDWIN KING.

Witnesses
W. H. BURRIDGE,
D. L. HUMPHREY.

(91)

WILLIAM LEES.

Improvement in Mules for Spinning.

No. 123,029. Patented Jan. 23, 1872.

Fig. 1.

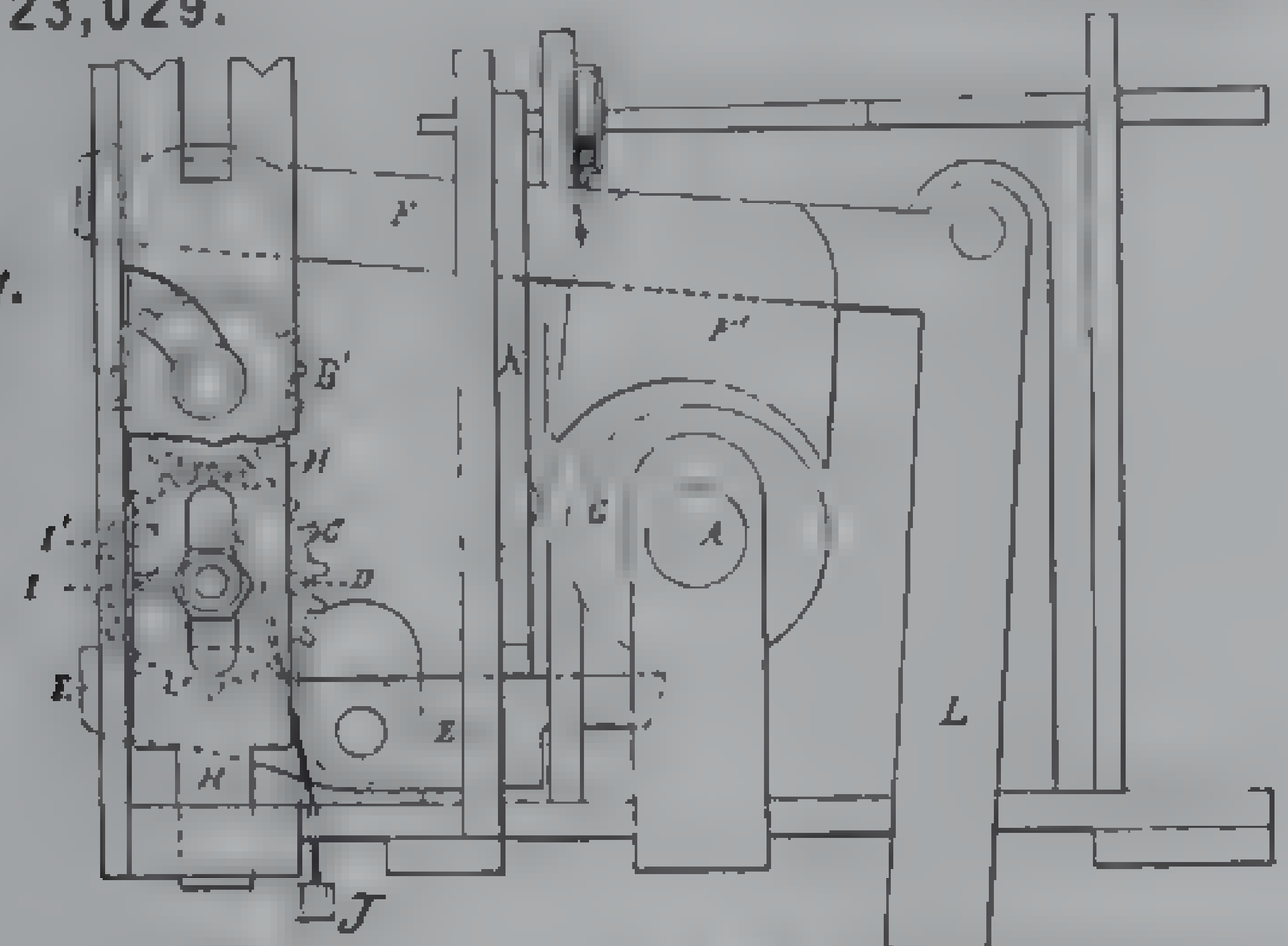
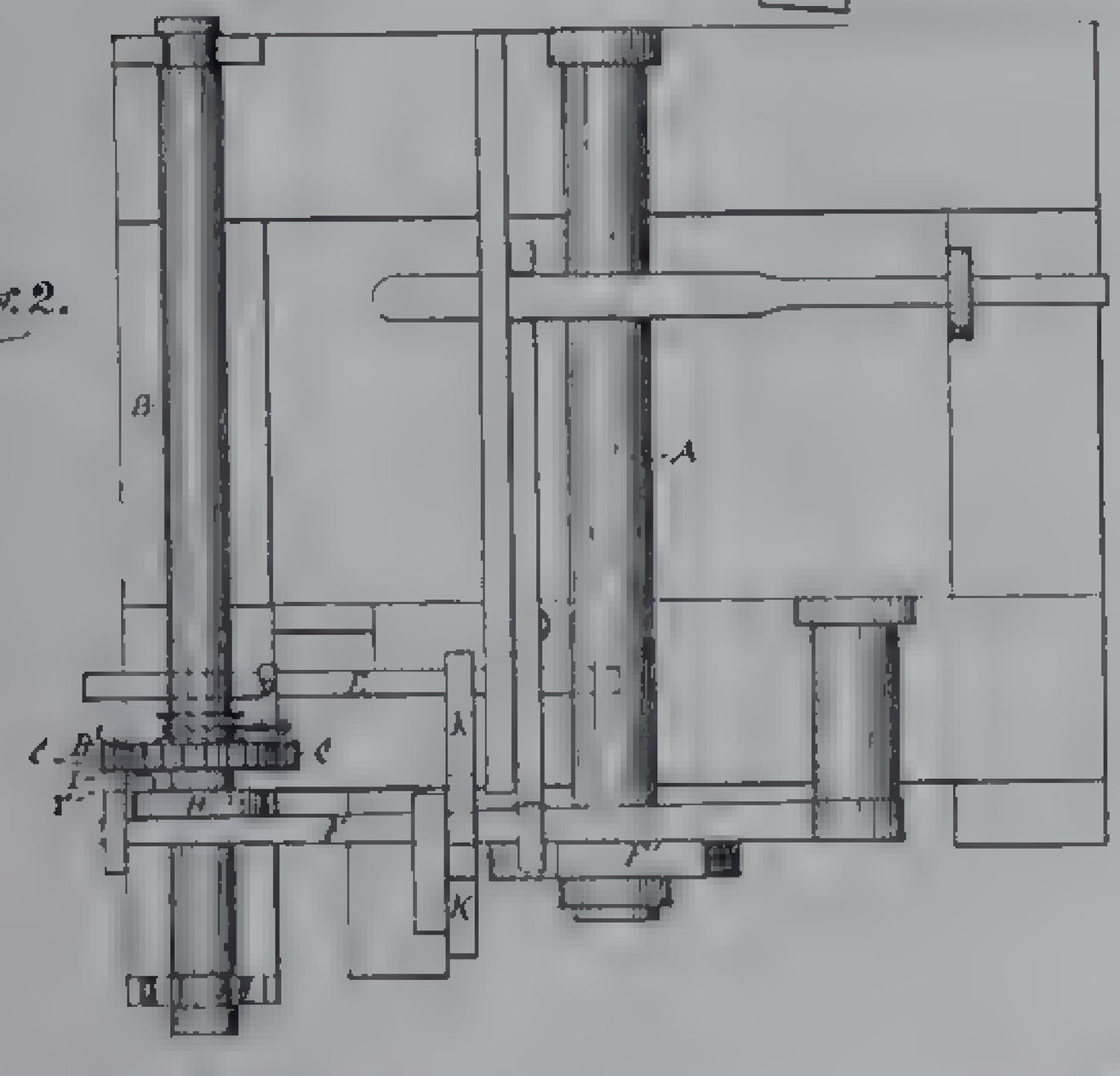


Fig. 2.



Witnesses:
J. Mathys.
Thos. L. Thomas

Inventor:
Wm. Lees
Per
Attorneys.

123,029

UNITED STATES PATENT OFFICE.

WILLIAM LEES, OF COATESVILLE, PENNSYLVANIA.

IMPROVEMENT IN MULES FOR SPINNING.

Specification forming part of Letters Patent No. 123,029, dated January 23, 1872.

To all whom it may concern:

Be it known that I, WILLIAM LEES, of Coatesville, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in Spinning-Mules, and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a top view.

This invention has for its object to prevent the delivery, by the drawing-rolls usual to mules to the spindles of the same, of more sliver than the latter can properly spin at any one stretch; the invention consisting in a mechanism whereby, when the proper length of sliver has been delivered, the spool-shaft is stopped, and whereby it is started again during the next run of the carriage inward.

Referring to the drawing, A is the shaft that rotates the spools on which the sliver is wound. B is the drawing-roll, the same having a pinion, B', at one end, which engages with a spur-gear, C, whose shaft is mounted in a sliding block, H, that is secured to a lever, F. When the roll B has delivered the proper length of sliver the pin D on the inside of the spur-gear C strikes a lever, E, near its outer extremity, depressing it and raising its other arm. On the latter rests the horizontal arm of a lever, K, which rests with its shorter arm on E. The vertical arm of K, therefore, swings outward, and the lever F, which rests on a shoulder thereon, falls until the shoe F' on said lever comes in contact with the pulley G on the spool-shaft A and stops the latter. At the same time the block H, descending with the lever F, lowers the wheel C out of gear with the pinion B', whereupon the spur-gear C stops, and ceases, therefore, to exert a pressure on the lever I. The roll B is brought to a stand at the same moment by means not here shown. As soon as the gear C and pinion B' are disconnected the former is put in rotation backward by means of a weight, J, hung to the hub of C. A pin, I, on the outside of the latter striking a stop, I', on the block H prevents the gear C from turning back too far. The carriage running out spins the quantity of sliver delivered by the roll B, and while running back strikes an arm, L, that is rigidly attached to the pivoted end of the lever F, and raises the latter till the wheel C gears again with the pinion B'. The shoe F' is at the same time removed from the pulley G, and the machine made ready for another delivery of sliver as soon as the roll B starts.

By this invention I secure a positive motion for stopping the delivery of sliver from the spool to the spindles. It is impossible for the operator having a mule with this improvement attached to put on more sliver than the spindles are set to deliver. A spinner having the old style of mule cannot hold his carriage back, and the roll will still continue to deliver sliver. With this improvement, even if the spinner does hold his carriage back, the rolls will only deliver a certain amount, and, therefore, there can be no uneven spinning. The invention can be applied either to hand mules or self-actors, and to jack spinning frames.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the drawing-roll B, wheel C, pin D, levers E, K, and F L, shoe F', block H, and spool-shaft A, as specified.

WILLIAM LEES.

Witnesses:
THOS. D. D. OURAND,
SOLON C. KEMON.

2 Sheets--Sheet 1.

O. B. LITTLE.

Improvement in Wheel Hub.

No. 123,030. Patented Jan. 23, 1872.

Fig. 1

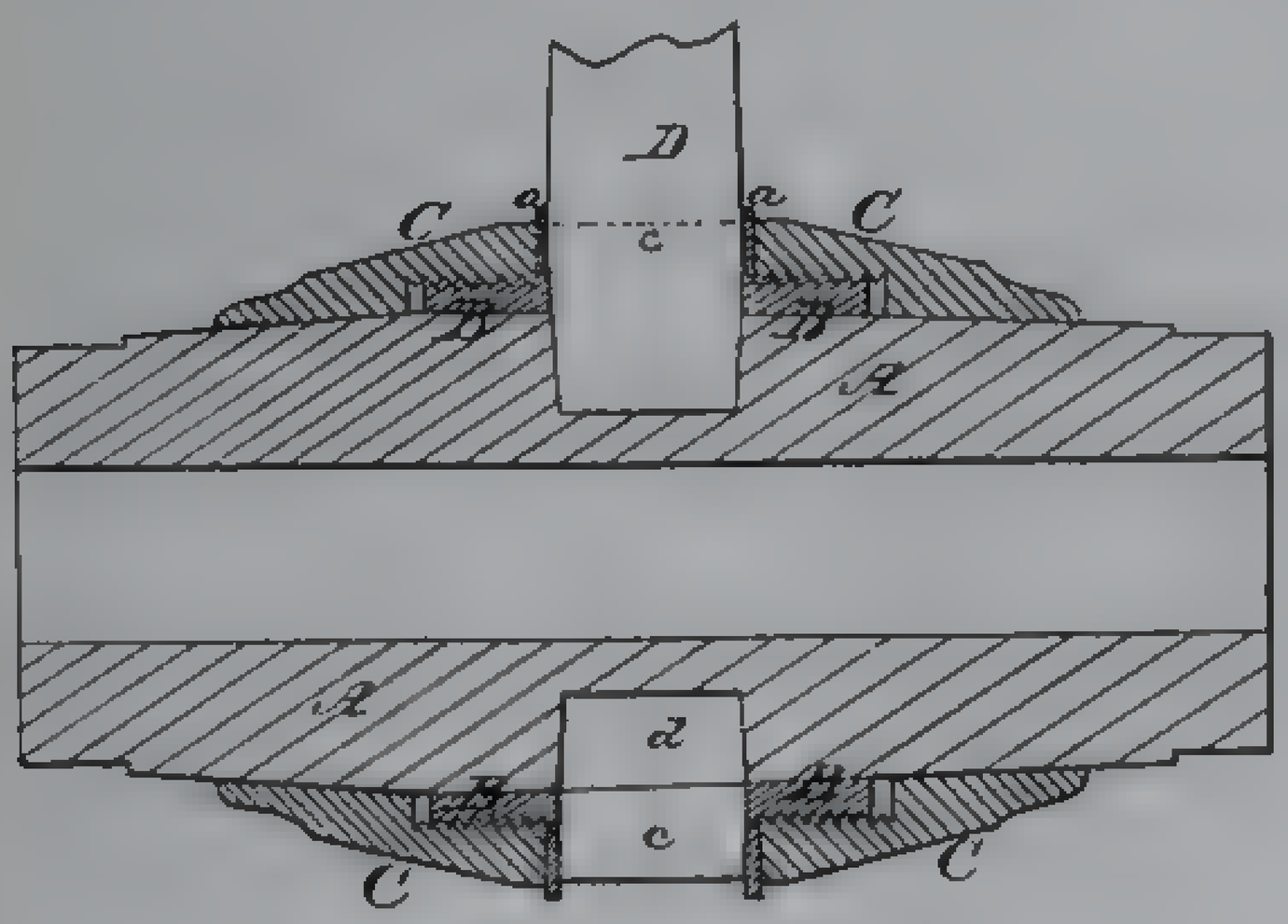
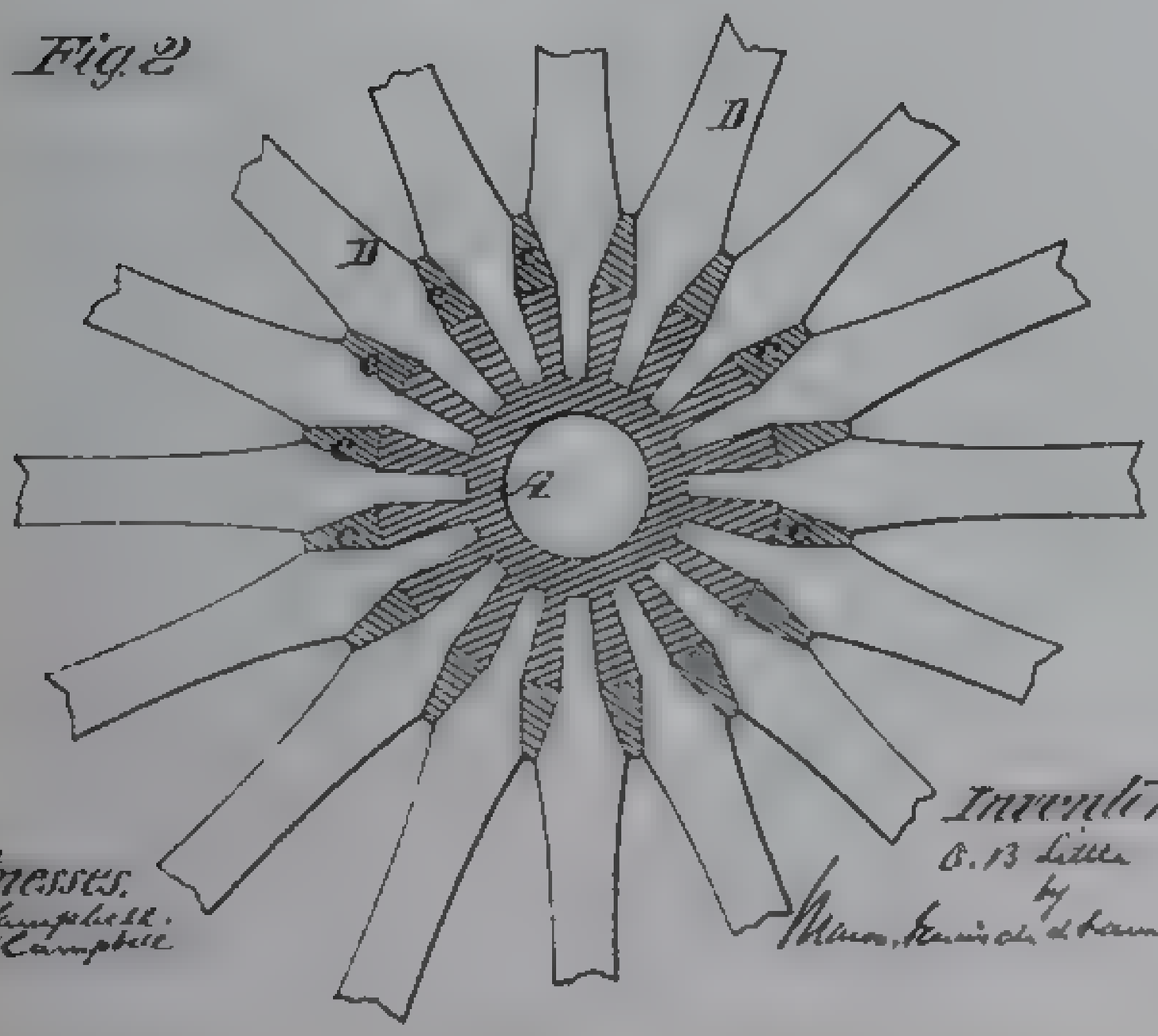


Fig. 2



Witnesses.
R. F. Hemphill Jr.
J. W. Campbell

Inventor
O. B. Little
by
Munn, Davis & Evans

121,030

UNITED STATES PATENT OFFICE.

OTIS B. LITTLE, OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN WHEEL-HUBS.

Specification forming part of Letters Patent No. 123,030, dated January 23, 1872.

To all whom it may concern.

Be it known that I, OTIS B. LITTLE, of Wheeling, in the county of Ohio and State of West Virginia, have invented an Improved Wheel Hub; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of marks thereon, forming part of this specification, in which

Figure 1, Plate 1, is a section taken diametrically through the hub with one spoke removed. Fig. 2, Plate 1, is a section through the hub and its band taken in the plane of the spokes. Fig. 3, Plate 2, is a section through the band. Fig. 4, Plate 2, is an external view of the band. Fig. 5, Plate 2, is an external view of the hub without the spokes.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of my invention consists in a wooden hub, the ends of which are exposed and adapted for being finished with the ordinary end bands provided with a flanged slotted central screw-band, and with screw caps which screw respectively upon the ends of this screw-band, and bear upon the sides of the shoulders of the spokes and also bear upon the ends of the hub, all as hereinafter shown and described.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A represents the wood part of the hub, which is made slightly tapering to receive upon it a metal band, B. This band B is forcibly driven upon the hub A so as to strengthen and support it at the point where it is subsequently mortised for receiving the spokes D. The band B may be made of any desired length and thickness properly proportioned to the size of the hub. It is a single piece of metal formed with beveled partitions *c c* separating the metal portions of the mortises *d* for the spokes. These partitions *c c* may be much thicker than the other portions of the band B, so as to form supports beyond the circumference of the band, as shown in the drawings; or the partitions need not be thicker than the other parts of the band, in which latter case they may be mitered so as to abut against each other beyond the partitions and completely close in the latter. After the band B is driven to its place on the hub the latter is mortised for the spokes and the spokes driven into it. The tenons on the spokes D are of such form that they are thickest and of course strongest at the outer edges of the partitions, as shown in Fig. 1, and are not liable to break at these points. The band B is screw-threaded on both sides of the partitions, and on this band nuts C C are screwed, which confine between them the spokes D and afford lateral support for these spokes beyond the band B. Between the edges of the spokes and the ends of the nuts C washers *a a* may be interposed, if desirable.

It will be seen from the above description that the band B is in fact a tubular bolt through which the spoke tenons pass, and to which the spokes are firmly confined by the two nuts C C. This band or bolt adds great strength to the wooden hub; and while it does this, it does not detract from the wood any of the good qualities which it possesses as a hub.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the extension partitions *c c*, screw-band B B, short screw-caps C C, and wooden hub A, extended beyond the caps C C and finished at its ends in the ordinary manner, substantially as described.

OTIS B. LITTLE.

Witnesses:
EDWARD REID, Jr.,
FRED. HEISEMAN.

J. S. MAUGHLIN & W. C. MARR.

Improvement in Wringing Machines.

No. 124,073. Patented Feb. 27, 1872.

Fig 1.

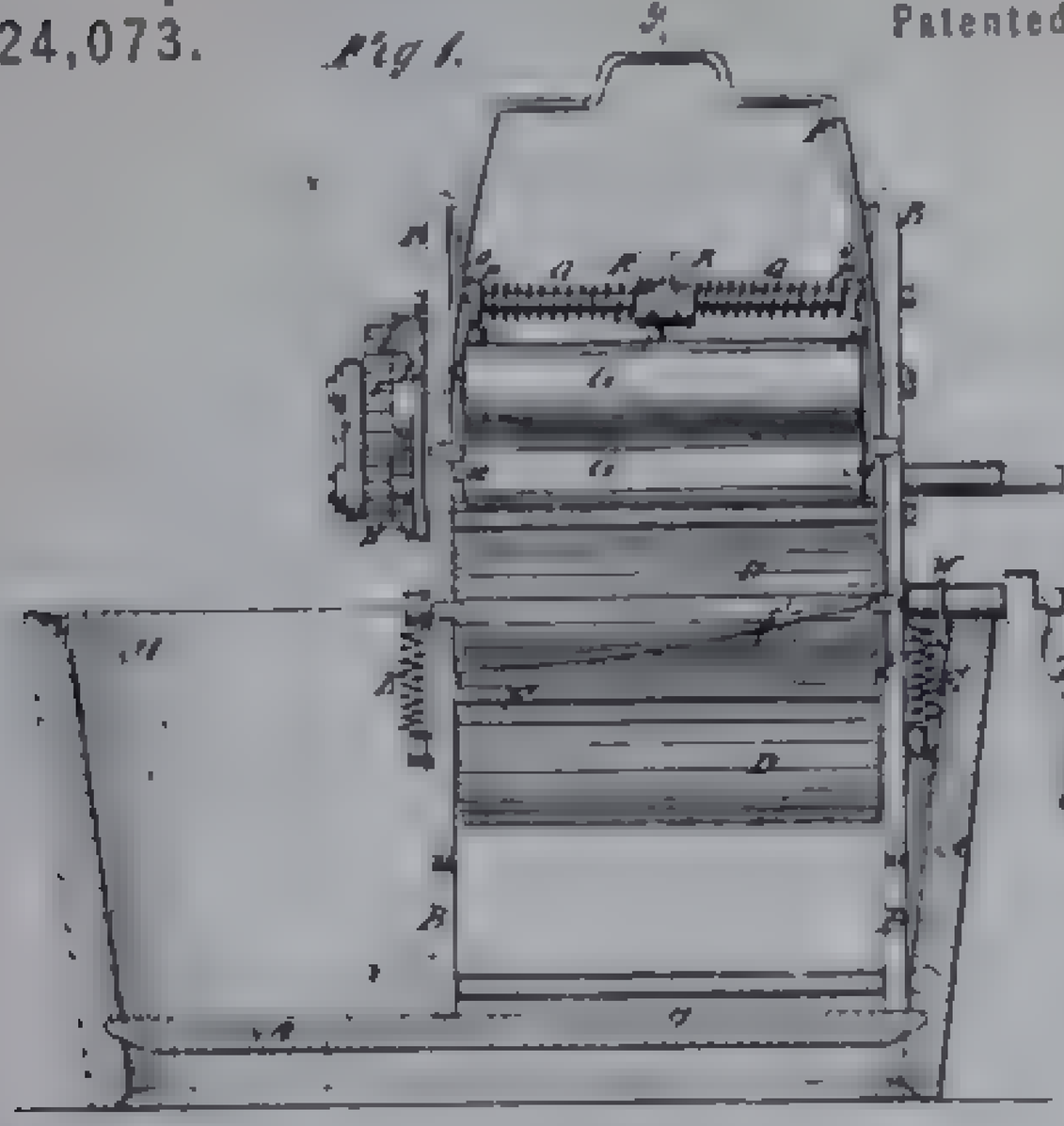


Fig 2.

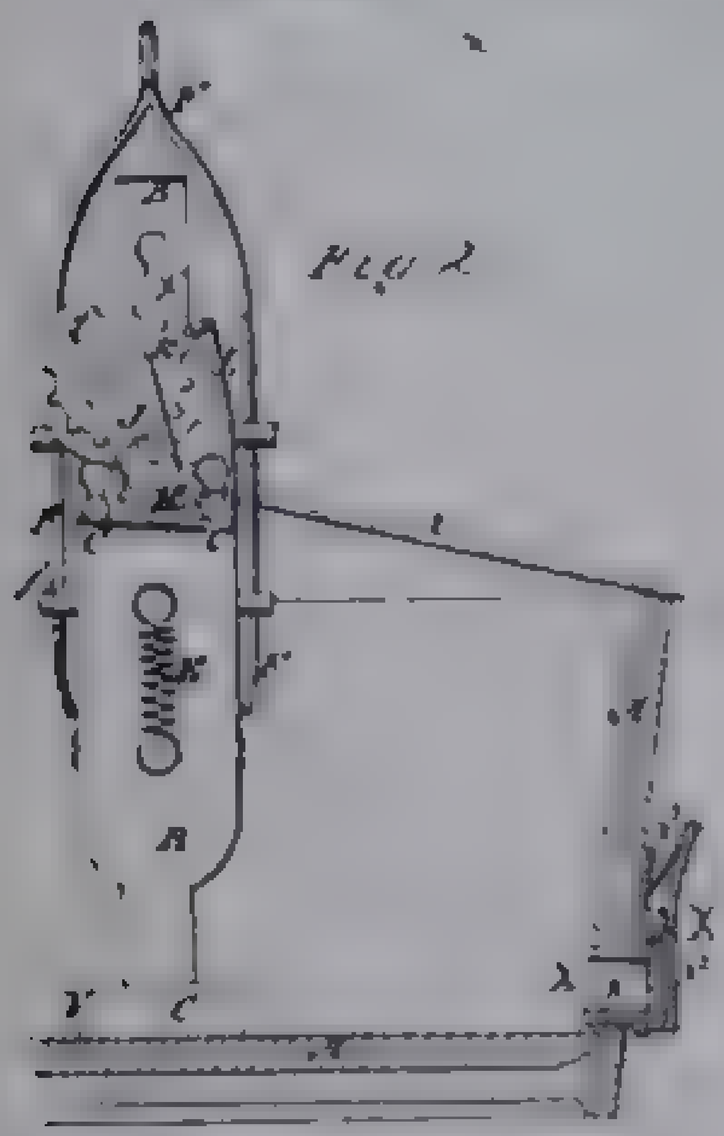
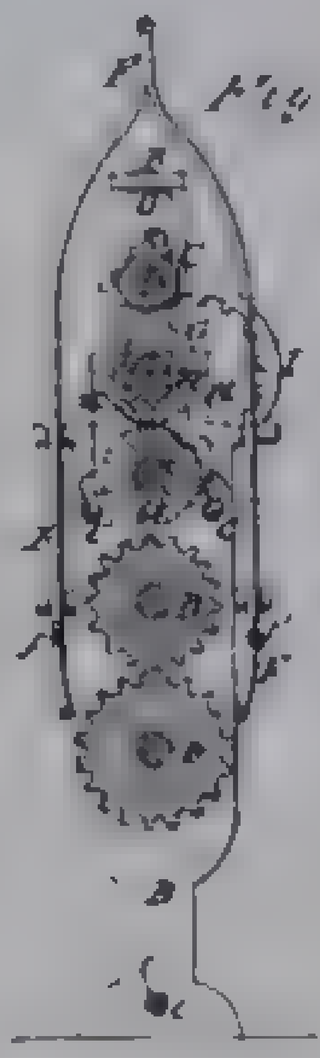


Fig 4.

Fig 3.



Witnesses:

E. Hoff

Geo. H. Strobel

Inventor:

J. S. Maughlin

W. C. Marr

Per Munn & Co

Attorneys.

121,073

UNITED STATES PATENT OFFICE.

JOSEPH S. MAUGHLIN AND WILLIAM C. MARR OF ONAWA, IOWA.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 121,073, dated Nov. 21, 1871.

Specification describing a new and Improved Clothes-Wringer invented by JOSEPH S. MAUGHLIN and WILLIAM C. MARR, of Onawa, in the county of Monona and State of Iowa.

Figure 1 is a side view of our improved machine, partly in section through the tub. Fig. 2 is an end view of the same, partly in section through the line *x x*, Fig. 1. Fig. 3 is a detail sectional view of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a detail section of the same. Fig. 5 is a detail view of the crank.

Similar letters of reference indicate corresponding parts.

Our invention has for its object to furnish an improved machine for wringing clothes, which shall be simple and compact in construction, convenient to use, and effective in operation in either capacity; and it consists in the construction and combination of the various parts of the machine as hereinafter more fully described.

A represents a tub, which may be an ordinary wash-tub, or a tub made expressly for the purpose. B are the end bars or standards of the machine, which are connected together and held in their proper relative positions by rods C. D are the washing-rollers, which are pivoted to and between the standards B. F is a frame-work, which straddles the wringing and upper washing-rollers, and slides up and down in guides attached to the standards B, so that the frame F may be pressed down upon the clothes passing between the rollers D to hold them while dirty spots are being rubbed. The frame F is provided with springs *f'*, one end of each of which is securely attached to the frame F, and the other end rests upon one of the guides in which the frame F works, to raise and hold the frame out of the way when not in use. G are the rubber or wringer rollers, the journals of which work in bearings in the standards B. One of the journals of the lower wringer-roller projects to receive the crank. To the projecting end of the other journal of said lower roller is attached a small gear-wheel, H, the teeth of which mesh into the teeth of the gear-wheel I, which is pivoted to the upper end of a short lever or connecting-bar, J, the lower end of which is pivoted to the end of the journal of the lower wringer-roller. The gear-wheel I is formed with an inwardly-projecting rim or flange, having internal gear-teeth formed upon it, into which mesh the teeth of the small gear-wheel K attached to the journal of the upper wringing-roller. L is a spring attached to the standard B, which rests upon the outer edge of the gear-wheel I, to press it forward against the said gear-wheel K, so that the teeth of the gear-wheel K may always mesh into the internal teeth of the gear-wheel I however the upper roller G may rise and fall in adjusting itself to the varying thickness of the clothes being wrung. M are plates interposed between the ends of the wringer-rollers G and standards B, the edges of which are bent inward to slightly overlap the ends of the rollers G to prevent the clothes from working in around the journals of the said rollers G. N are short bars, the lower ends of which rest upon the journals of the upper wringer-rollers G. The upper ends of the bars N are notched to receive the upper rod C, and abut against the lower ends of the short bars O, which are also notched to receive the said rod C. The upper ends of the bars O rest against flanges, shoulders, or other stops formed upon or attached to the upper ends of the standards B. The adjacent ends of the bars N O incline inward, and rest against the outer side of loose collars P, placed upon the rod C, and against the other or inner sides of which rest the outer ends of the springs Q. The inner ends of the springs Q rest against bevel or cam collars R, which are placed upon the rods C, upon opposite sides of the stationary collar S, and are provided with thumb-pieces to enable them to be conveniently turned. The stationary collar S is formed upon or attached to the center of the rod C, and its opposite sides, against which the movable collars or cams R rest, are also made inclined or beveled, as shown in Fig. 1. The tension of the springs Q and the inclination of the bars N O should be so adjusted with respect to each other that the wringer-rollers G will pass upon the clothes passing between them with about the same pressure whatever may be the thickness of said clothes, and however said thickness may vary. By this construction, by adjusting the position of the movable cams or collars R the pressure upon the clothes may be varied at will. Upon the outer ends of the projecting journals of the upper washing-roller

T..E. McDONALD.

Improvement in Clothes Wringers.

No. 124,367. Patented March 5, 1872.

Fig 1.

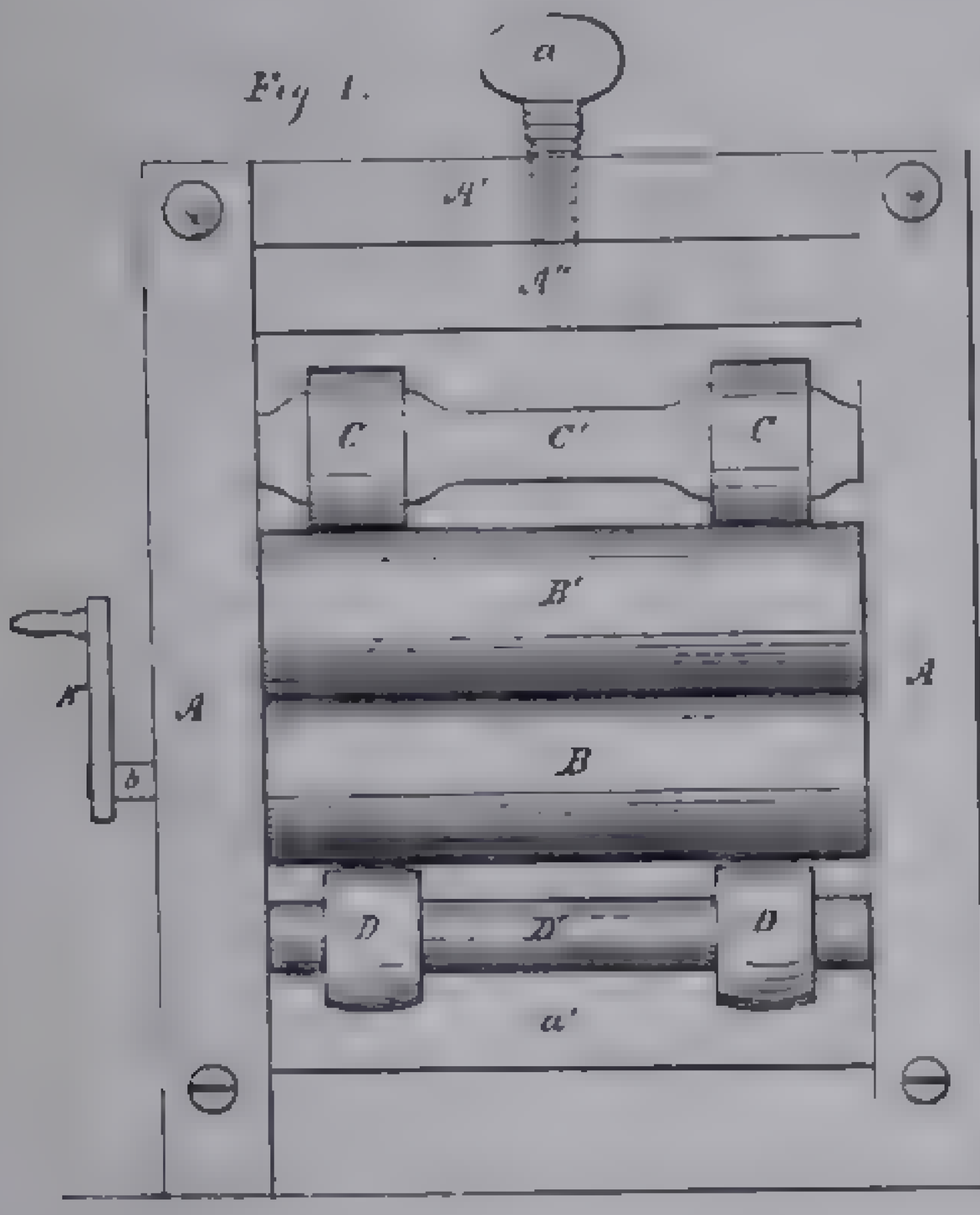


Fig 2.

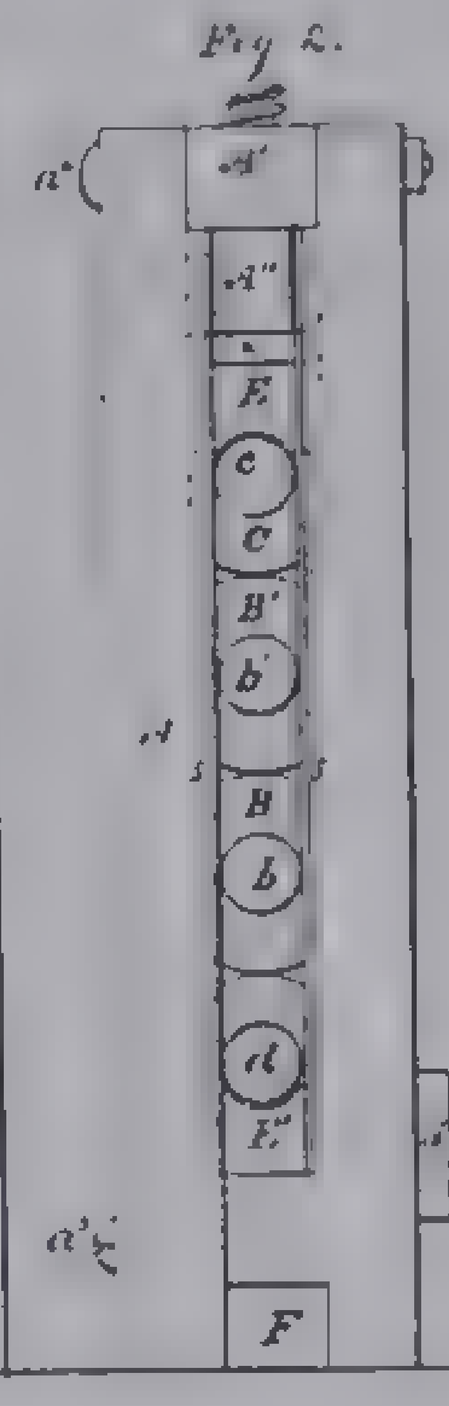
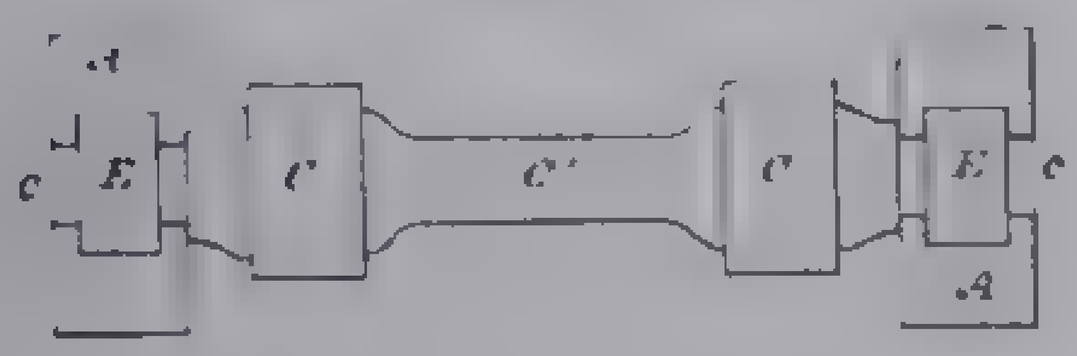


Fig 3.



Witnesses:
C. Whitman
M. A. Daniels

Inventor
Thomas E. McDonald
By A. Crawford Atty

121,367

UNITED STATES PATENT OFFICE.

THOMAS E. McDONALD, OF TRENTON, NEW JERSEY

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 121,367, dated March 5, 1872

I, THOMAS E. McDONALD, of Trenton, in the county of Mercer, in the State of New Jersey, have made certain Improvements in Machines for Wringing Clothes, of which the following is a specification:

The object of this invention is to improve the wringers now used, so as to do away with the boxes in which the journals of the spindles of the wringer rolls revolve, and thereby lessen friction in the use of the wringer and strain on the machines; and it consists in the construction and arrangement of the parts that form the wringer, as will be more fully hereinafter described.

In the drawing, Figure 1 represents a side view of the wringer. Fig. 2, an end view of the same; and Fig. 3 is a horizontal sectional view on line *x x* in Fig. 1.

A A are the upright posts of the frame, each having an upright slot centrally located in the upper part thereof to receive the journals of the wringer rolls and of journals of the supporting and presser rolls. A' is a horizontal cap, let into the heads of post A and securely bolted thereto. A'' is a sliding presser beam, with tenons at each end that fit into the upright slots in the posts, and rests upon a flexible pad above a half box over the journals of a presser shaft. *a* is a presser screw, working in a nut fast in the cap piece A', and bears upon the presser-beam A'', and by which the wringer rolls are forced toward each other and the pressure regulated. *a'* is a cross girt, to support and hold the bottom ends of posts A. B and B' are the usual elastic wringer rolls, having their journals *b* and *b'* extend into the upright slots in the posts, while the journal of one end of one of the rollers passes through the post and receives a crank handle B'', by which the wringer rolls are revolved. C C are two flexible revolving presser rolls, fast on the shaft C', placed directly above the wringer-rolls, and have journals *c c* extending into and revolving in the slots in posts A. These rolls C C are preferably made of rubber the same as the wringer-rolls, and secured to shaft C in any proper manner and near to each end thereof. D D are the supporting rollers on revolving shaft D', and placed directly underneath the wringer rolls. Shaft D has journals *d*, that extend into and revolve in the upright slots in posts A, and bear in suitable half boxes under the journals *d*. The supporting rollers D are generally of wood or any non-elastic material that will stand water without much wear; but if great elasticity is required, or more than can be given through the elastic rollers C to bear upon the wringer roll, they may be made of rubber and used in the same manner as though the hard or non-elastic rollers were used as above described. E E are half boxes over the journals of shaft C, which carries the flexible rollers C and slots *e e* moves in posts A. E' represents one of the half boxes under the journal of shaft D that carries the supporting rollers D, and is firm upon the bottom of the slot in post A. *e* is a rubber or other flexible spring pad interposed between the presser beam A'' and boxes E, and over journals *c* of shaft C in the slots in posts A. The inner faces of the slots in posts A are preferably lined with sheet metal *f*, against which the journals of the rollers will touch in their revolutions or reciprocations, but hard wood would wear a long time, as there is but little side pressure on the journals of the wringer rolls against the sides of the slots. F is an open slot at the bottom of the posts, to receive the top of a wash tub or boiler, and to which the wringer frame is securely fastened by any of the proper devices for such purpose. The journals of the wringer rolls B and B' are free to rise or fall in the slots of the posts, and do not bear in boxes, as is usually the case, and the slots act as guides and keep the rolls in their proper place, while the bearing of the wringer rolls is upon the revolving rollers D, and the pressure is applied to the top or movable roller through the elastic roller C, which can be forced down upon the wringer rolls by the screw *a* bearing upon the presser-beam A'', and giving any amount of pressure desired.

If the flexible rollers C C on shaft C' and the rollers D D on shaft D' may in some instances revolve upon their shafts, and the shafts themselves be stationary. When this is the case, the rolls will have to be supplied with flanges to hold the rubber bands for the flexible rolls, and the solid or non-flexible ones will be wood or metal; but I prefer the construction as first described. The supporting-rollers D D on

R. B. MILLER.

Steam Heating Apparatus for Preventing the Accumulation of Snow and Ice Upon Railways and Streets.

No. 125,141. Patented April 2, 1872.

Fig. 1

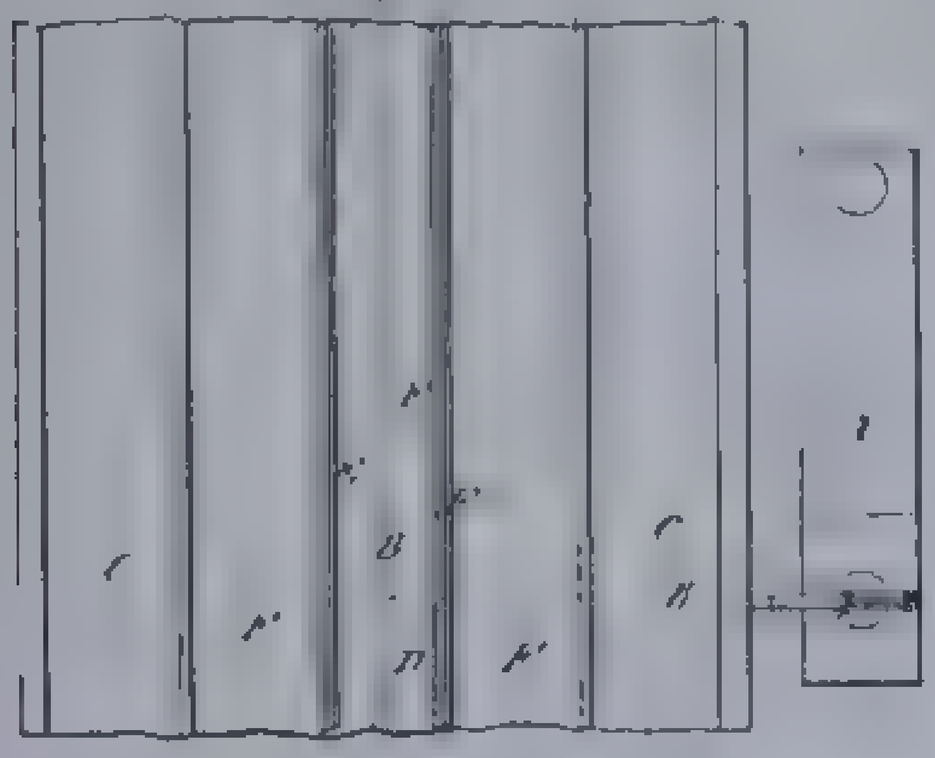


Fig. 2

Fig. 4

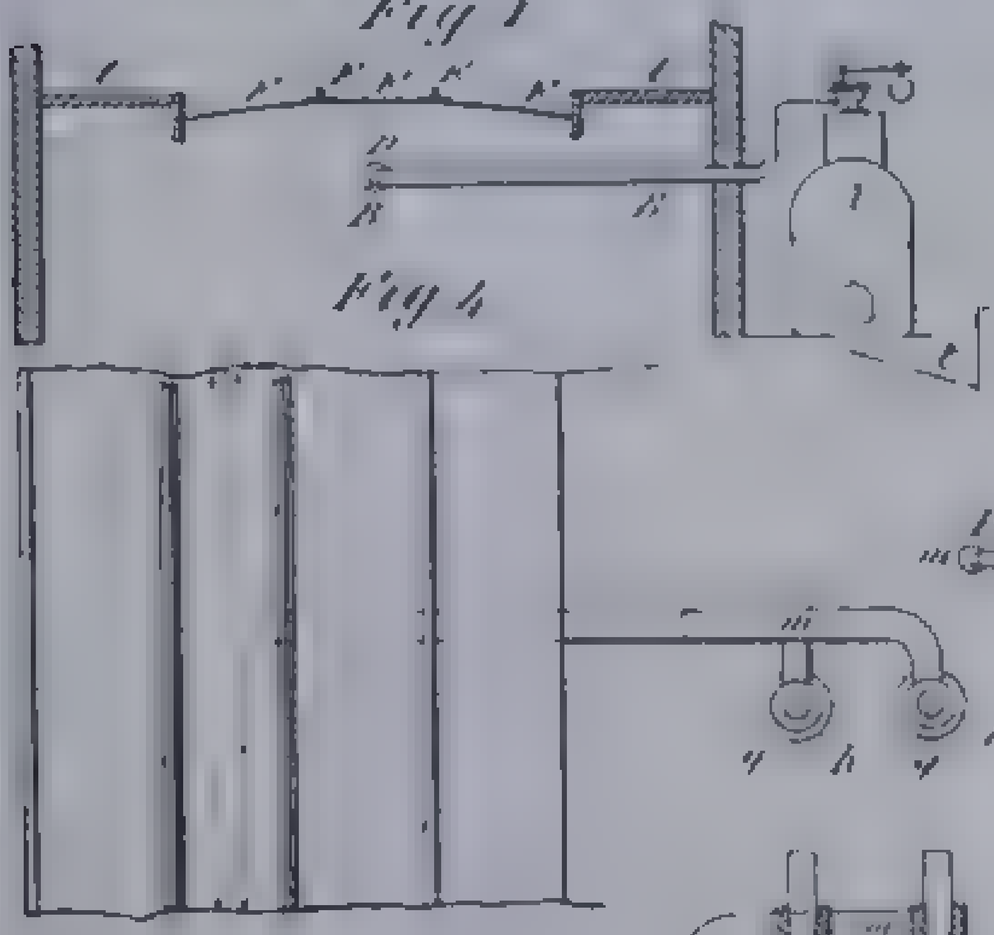
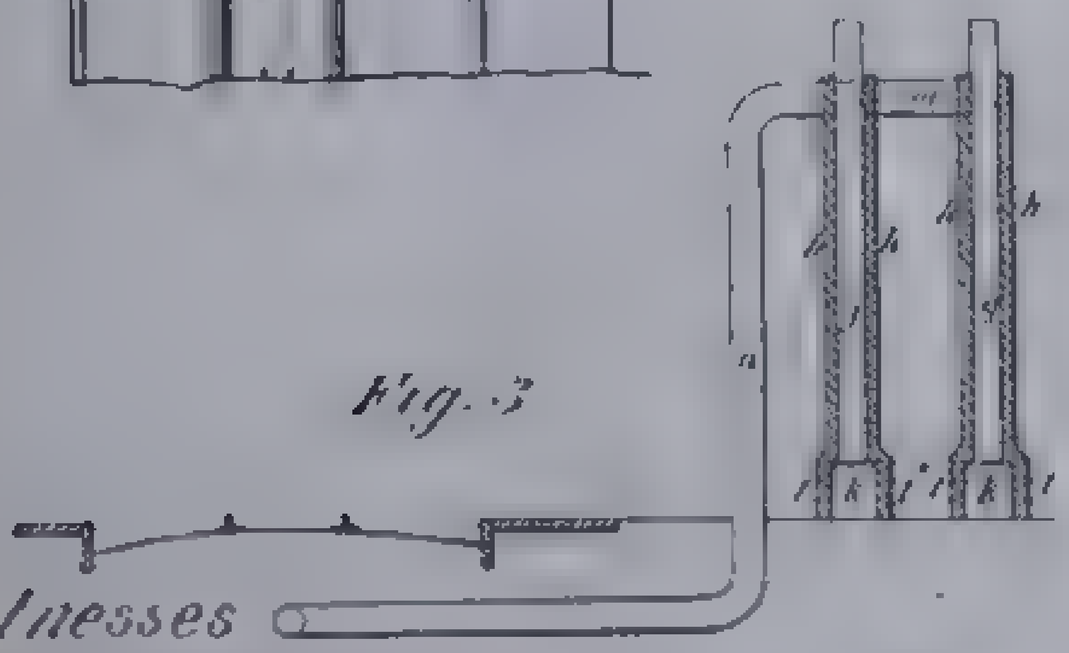


Fig. 3



Witnesses

D. C. Sanderson

C. Evans McKinley

Inventor

Rutger B. Miller

UNITED STATES PATENT OFFICE.

RUTGER B. MILLER, OF UTICA, NEW YORK.

IMPROVEMENT IN STEAM-HEATING APPARATUS FOR PREVENTING THE ACCUMULATION OF SNOW AND ICE UPON RAILWAYS AND STREETS.

Specification forming part of Letters Patent No. 123,141, dated April 2, 1872

To all whom it may concern:

Be it known that I, RUTGER B. MILLER, of the city of Utica, in the county of Oneida and State of New York, have invented a new and useful Mode of Preventing the Accumulation of Snow and Ice upon Streets, Railways, and Sidewalks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of the specification, in which—

Figure 1 exhibits a transverse section through the street, showing sidewalks and railways; also, steam-boiler. Fig. 2 is a plan view of the same. Figs. 3 and 4 are similar views, showing iron stacks for utilizing the waste heat of gas-works. Fig. 5 is a street lamp.

Similar letters of reference indicate corresponding parts.

The nature of my invention consists in providing heated air or steam or water from a furnace or boiler, or any source whatever, which air or steam or water is conducted through pipes of whatever material laid under the streets or railways or sidewalks, thus warming the surface thereof sufficiently to melt the snow as it falls thereon during a snow-storm, or drifts thereon after a storm.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the principal streets of large cities a large portion of the heat required may be derived from the furnaces, steam-boilers, gas-works, and lamps along the streets without the expense of fuel, the waste heat of which may thus be utilized at small expense. Independently of these sources of heat construct a boiler of, say, sixty-horse power, as represented at A in Fig. 1, which will supply at least a mile of pipe if placed midway between the two extremes, the pipe being laid three feet below the surface. From said boiler pipe B (two or three inches in diameter) is carried three feet below surface of sidewalk C C to a pipe, D, running lengthwise under street, between the railway tracks E E, thus conveying the steam through the whole length of the street, thereby warming the surface of the track F F F sufficiently to melt the snow as fast as it falls thereon. Air and steam may both be used by laying the steam pipes B and B inside of an earthen pipe, D, say nine inches in diameter. Figs. 3 and 4 show the method of concentrating the waste heat of the gas works and the manner of applying the same. By substituting, in place of brick-chimneys, flues *g g*, made of one-fourth inch boiler-iron twelve inches diameter by eighteen feet high, inclose the same by an outer casing, *h h*, of sheet iron, covered with felt jacket, with a space of five inches between the two, forming a chamber to receive the cold air from the base *k k* of the stack through openings *b b* and driving the hot air up to within two or three feet of the top; then connecting the several chambers to one horizontal receiving-pipe, *m m*, covered with felt jacket twelve inches in diameter, and connect the same to a perpendicular jacketed pipe, *n*, descending three feet below the surface of the ground, and thus distributing the hot air through a continuation of the pipe for the purpose intended. Independently of the heated air which may be derived from gas-works and other large furnaces, the boiler A, Fig. 2, may be placed at the lower extremity of the earthen tube D, which may be used as a chimney, by being eighteen or twenty four inches, instead of nine inches diameter. Let the furnace and boiler be placed under ground and so jacketed as to retain all the heat in a tight chamber, and let the steam pipe B enter the chimney D, at the further extremity of which chimney D construct a suction-fan driven by a small engine, say two or three horse power, thus producing a draught of sufficient force to exhaust the heated air of the furnace and air-chamber in which it is inclosed. This volume of heat will pass with great velocity through D for a great distance computed by miles, as is demonstrated in London and elsewhere, and will furnish heat enough in its passage to clear streets, sidewalks, and railways of snow falling upon the surface and melting as it falls, the heat being distributed in three or more earthen tubes running parallel with D, and laid one under each sidewalk, as well as under each railway-track. If the carriage-way is to be cleared let the tubes be placed under them also. No snow will lie within several feet of the pipe, and the surface will be kept as dry as in summer. The

(16.)

JOHN A. E. MORONEY.

Boots and Shoes.

No. 122,632. Patented Jan. 9, 1872.

Fig. 1

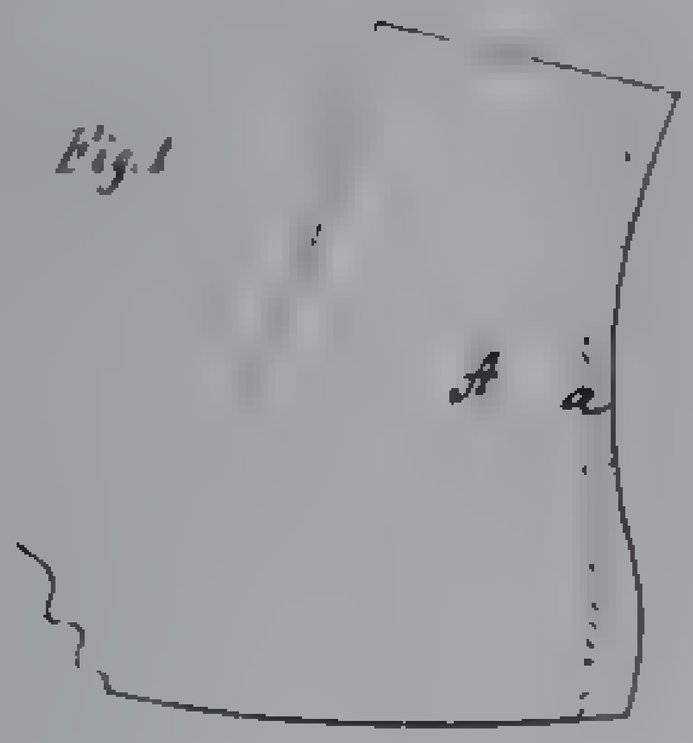


Fig 2

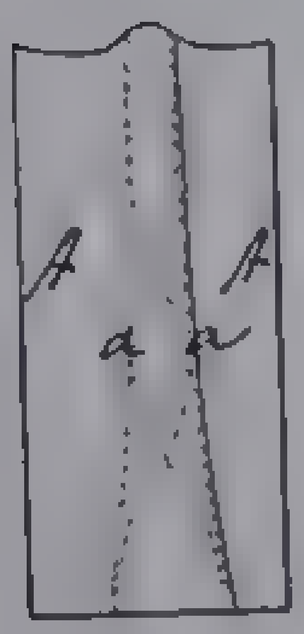


Fig 3.

Witnesses:

Henry K. Miller

C. L. Ouest.

Inventor

John A. E. Moroney

per Alexander Mason

Attorneys

122,632

UNITED STATES PATENT OFFICE.

JOHN A. E. MORONEY, OF PONTIAC, MICHIGAN.

IMPROVEMENT IN BOOTS AND SHOES.

Specification forming part of Letters Patent No. 122,632, dated January 9, 1872

To all whom it may concern:

Be it known that I, JOHN A. E. MORONEY, of Pontiac, in the county of Oakland and in the State of Michigan, have invented certain new and useful Improvements in Boots and Shoes, and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, forming a part of this specification.

The nature of my invention consists in cutting the side pieces of boots and shoes in such a manner that their rear edges will overlap each other far enough to bring the seams on the sides instead of directly in rear, as now usually done.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view, Fig. 2 a rear view, and Fig. 3 a horizontal section of so much of a boot or shoe as will illustrate my invention.

A A represent the two side pieces of a boot or shoe, which are cut so much larger than is usually done that their rear edges will overlap each other. When then sewed together there will be a seam, *a*, on each side instead of directly at the rear.

The usual seam in the rear is always objectionable and annoying; but by cutting the side pieces so as to form one seam on each side this is entirely obviated.

The space between the seams *a a* may be stitched with any kind of fancy sewing, if desired, as shown in Figs. 1 and 2.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A boot or shoe having its side pieces cut large enough to allow their rear edges to overlap each other, so as to bring a seam on each side instead of directly at the rear, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of September, 1871.

JOHN A. E. MORONEY.

Witnesses:
A. N. MARR,
O. M. ALEXANDER. (16)

(16.)

CHARLES E. MORRELL.

Machine for Slitting Shoe Binding.

No. 122,958. Patented Jan. 23, 1872.

Fig 1

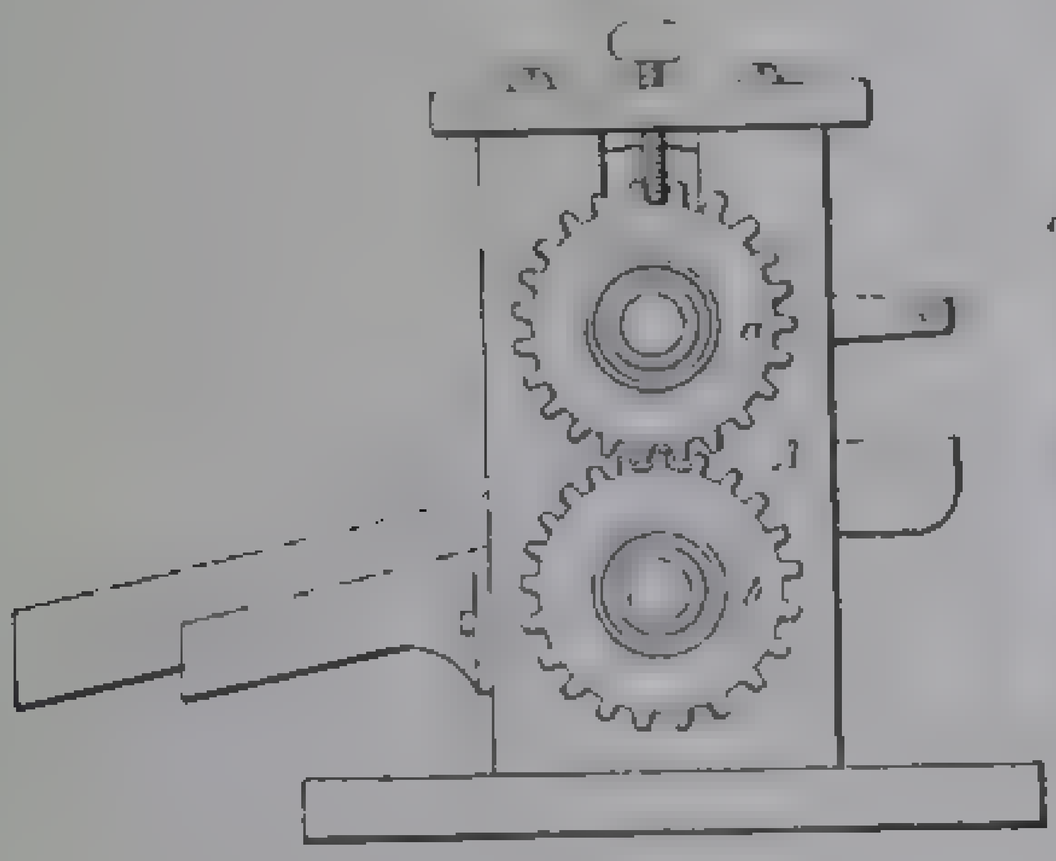


Fig 2

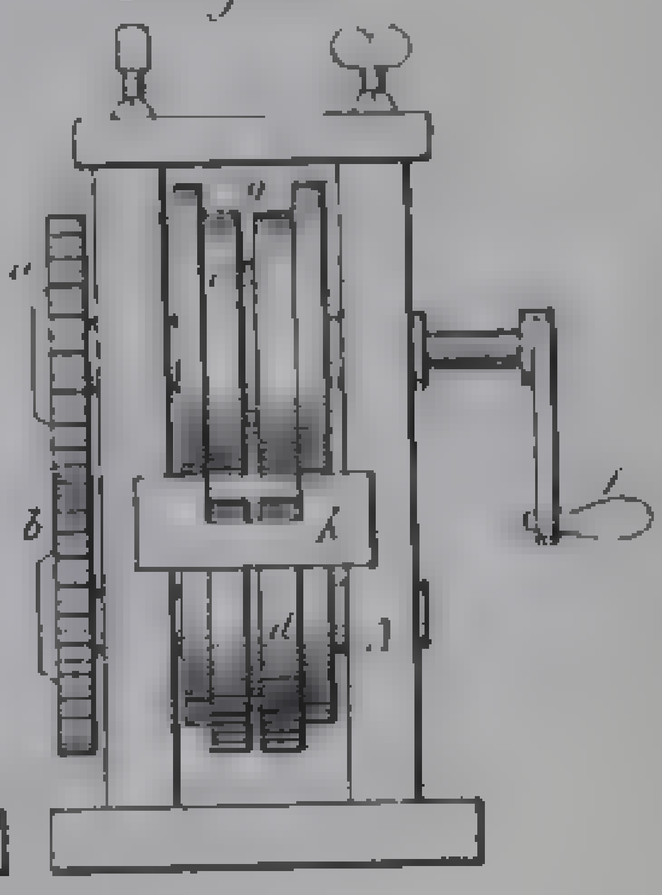


Fig 3

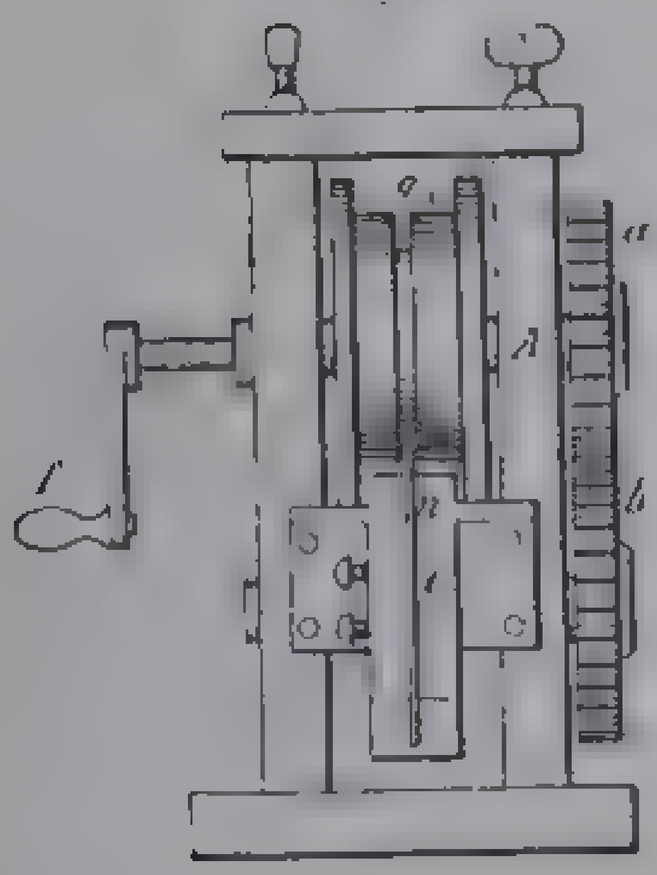
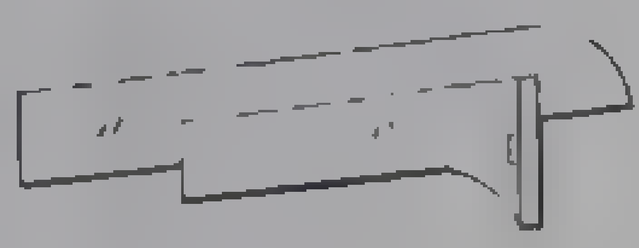


Fig 4



Witnesses

Richard W. Robinson

D. W. Semmes

Inventor

Chas. E. Morrell

122,958

UNITED STATES PATENT OFFICE

CHARLES E. MORRILL, OF DEERING, MAINE.

IMPROVEMENT IN MACHINES FOR SLITTING SHOE-BINDINGS.

Specification forming part of Letters Patent No. 122,958, dated January 23, 1872.

To all whom it may concern:

Be it known that I, CHARLES E. MORRILL, of Deering, in the county of Cumberland and State of Maine, have invented a new and useful Slitter for Making Shoe-Bindings; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, rear end elevation; Fig. 3, front end elevation; Fig. 4, side view of the slitter.

Same letters show like parts.

My invention has for its object the production of a machine for slitting strips of leather for shoe bindings, which in my process has been made from the whole skin, in the form of a wide strip, cut and colored in the center at the same operation, before being submitted to this machine. This invention cuts into two strips, of the same width, a continuous wide strip, (formed of shorter ones cemented together,) by cutting through the center of the black band or stripe made in the center of said band or wide strip.

My machine consists of a frame, A, carrying two gears, *a b*, two feed rolls, *c d*, and a cutter, *e*. The feed roll *c* is grooved, so that it fits into the groove. (See Fig. 3.) Both revolve, and, by means of the shaft *c*, the two gears *a b*, and crank *f*, the cutter *e* is in an inclined position, and the point of it is partly up to a slot, *a*, in the feed roll *c*. The strip of binding or leather intended for the same is introduced in Fig. 2 at *k*. It is carried between the rolls by friction, and against the knife or cutter *e* and its metal blade. The strip of leather fits up into the groove of the feed roll *c*, (see Figure,) and is kept there by the feed roll *d*, fitting also into said groove, thus kept firm and centered in its cut by the metal of the cutter. *n* shows the metal part of *e*, and, coming through the machine on the front side, (Fig. 3,) drops or runs out on both sides of *e*, divided into two strips of binding.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the feed rolls *c d*, gears *a b*, cutter *n*, and part A, and crank *f*, to form a machine for slitting shoe bindings, as herein set forth.

CHAS. E. MORRILL.

Witnesses:
RICHARD W. ROBINSON,
D. W. SCRIBNER.

JOHN L. NORTH.

Improvement in Crucibles for Melting Metals.

No. 124,076. Patented Feb. 27, 1872.

Fig 1

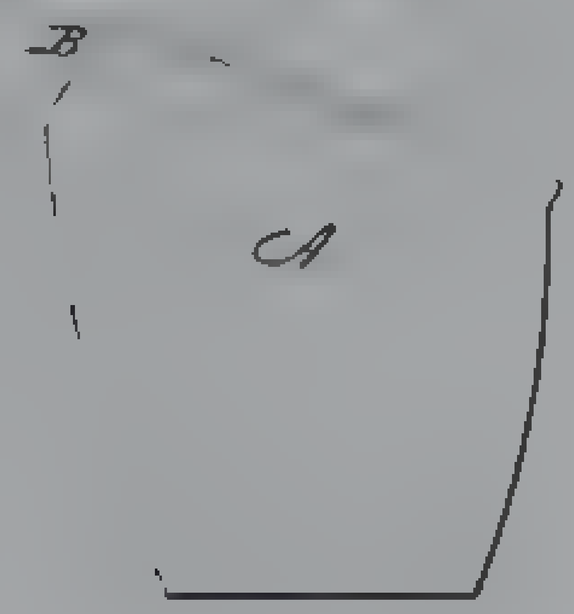
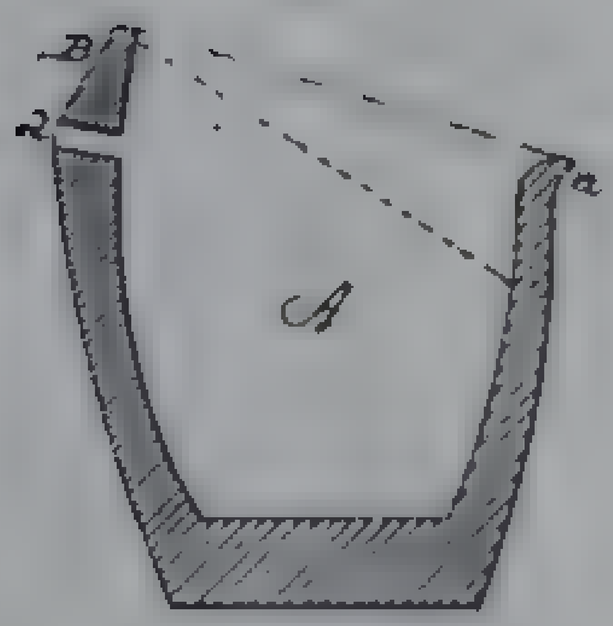


Fig 2



Witnesses
[illegible]

John L. North
per
[illegible]
John E. Earle

124,076

UNITED STATES PATENT OFFICE.

JOHN L. NORTH, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN CRUCIBLES FOR MELTING METALS, &c.

Specification forming part of Letters Patent No. 124,076, dated February 27, 1872

To all whom it may concern:

Be it known that I, JOHN L. NORTH, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Crucibles, and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1, a side view; and in Fig. 2, a vertical central section.

This invention relates to an improvement in crucibles particularly designed for pouring that class of metal which oxidizes quickly when exposed to the atmosphere. Heretofore in this class of work it has been the practice to employ an instrument while pouring to prevent oxidized portion of the metal on the surface from pouring off with the clear metal, the operation often requiring two persons, one to pour and the other to prevent the oxidized metal or other foreign substance from flowing off with the metal. The object of my invention is to overcome this difficulty; and it consists in constructing the crucible with the side extending above the mouth, so that, as the crucible is tilted, the metal will flow above the mouth, drawing the clear metal from below the surface.

A is the crucible, constructed from any suitable material, and these are usually formed with a mouth at the upper edge, as at *c*, and this may, if desirable, be still retained. In my invention I form the mouth *d* at about the same relative height as heretofore, and extend the side above, as at *b*, so that, when filled with metal and tilted, the surface, assuming the position as denoted in broken lines, will carry the oxidized metal and foreign substances above the mouth *d*; consequently draw nothing but clear metal, and thereby make no inconsiderable saving in metal: as, when the exposed surface is once oxidized, no more metal is affected.

I claim as my invention—

As an article of manufacture, a crucible having the mouth *d* open from below the upper edge of the crucible, substantially as herein set forth.

JOHN L. NORTH.

Witnesses:
T. B. SMITH,
H. A. BRADLEY.

S. W. NYCE.

Improvement in Sawing Machines.

No. 125,215. Patented April 2, 1872.

Fig. 1.

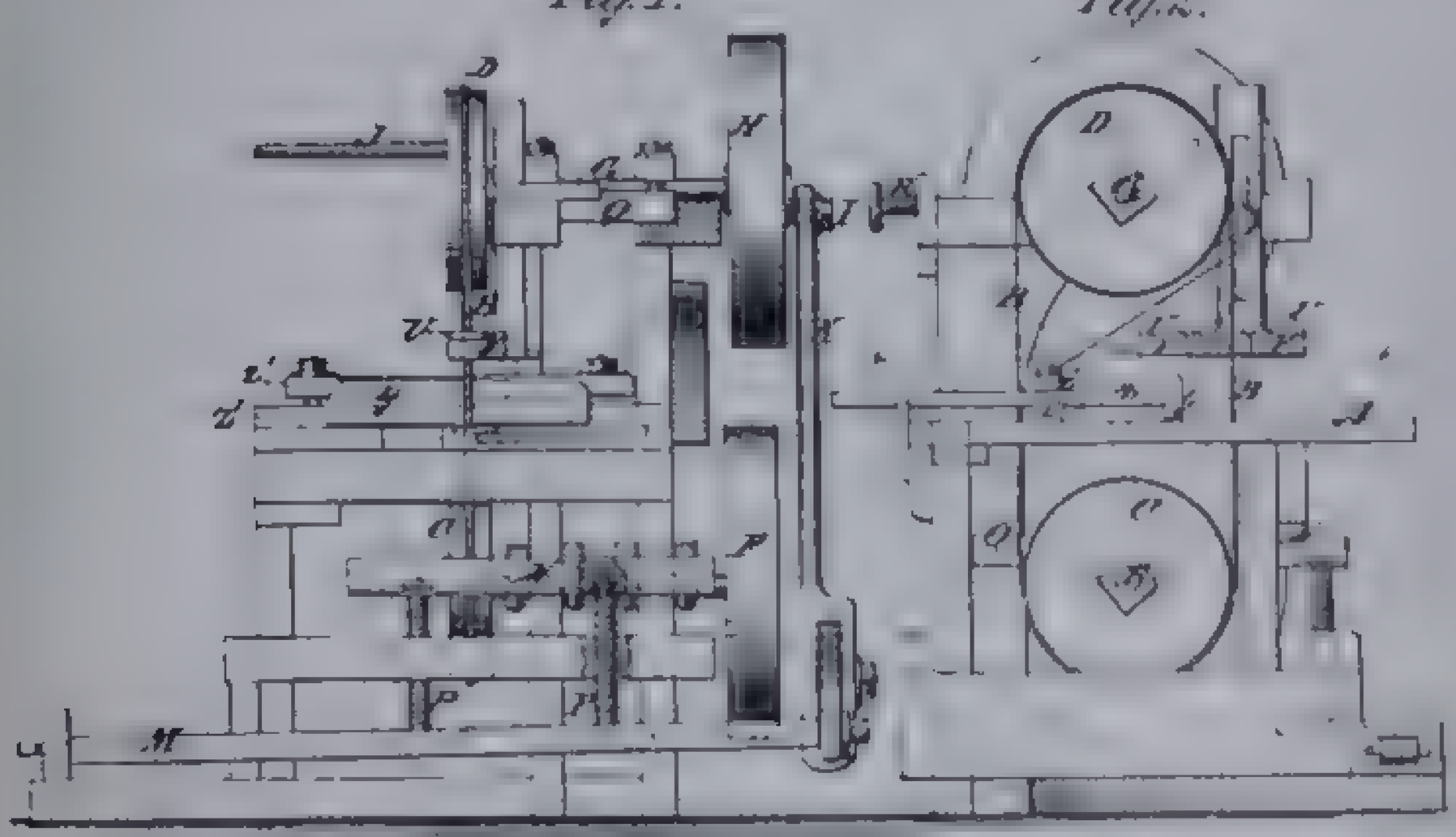


Fig. 2.

Fig 3.

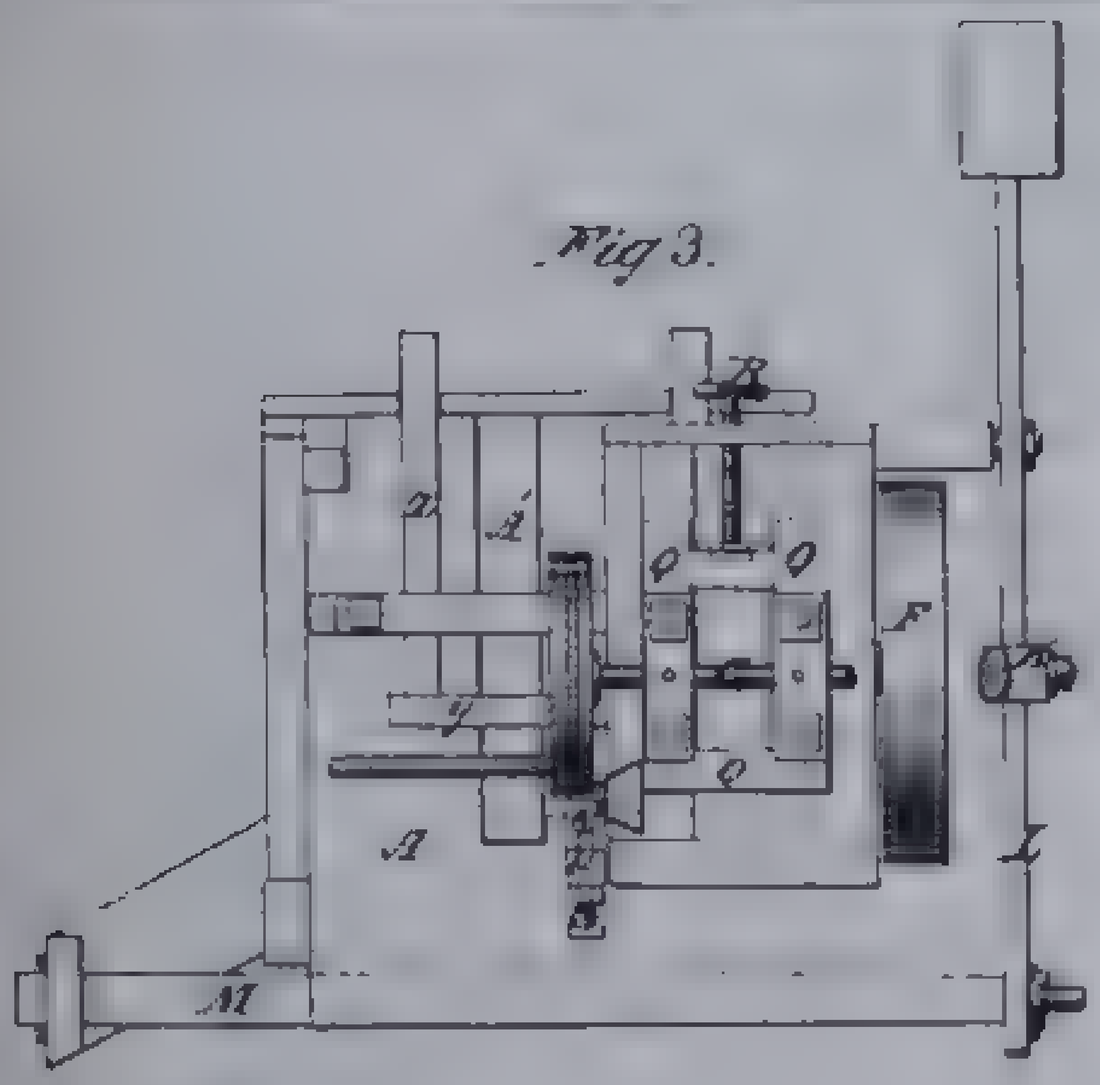
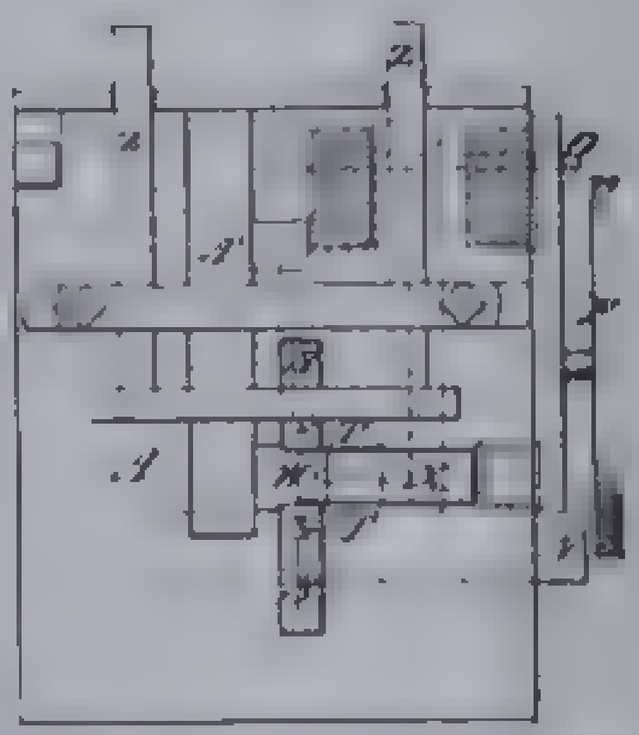


Fig. 4.



Witnesses:

Hans Brehm

Geo. W. Maber

Inventor:

S. W. Nyce

Per Munn & Co

Attorneys.

123,215

UNITED STATES PATENT OFFICE.

SAFARYNE W. NYCE, OF BLOOMING GROVE, PENNSYLVANIA.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. 123,215, dated April 2, 1872.

Specification describing a new and Improved Sawing-Machine, invented by SAFARYNE W. NYCE, of Blooming Grove, in the county of Pike and State of Pennsylvania.

The invention will first be fully described, and then clearly pointed out in the claim.

Figure 1 is a front elevation of my improved machine, with some parts sectioned. Fig. 2 is a side elevation. Fig. 3 is a top view; and Fig. 4 is a horizontal section taken on the line *x x* of Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents the saw-table; B, the saw; C, the lower saw-pulley; and D, the upper one. The shaft E of pulley C is provided with a driving pulley, F, by which power may be applied from any suitable source, and the shaft G is also provided with a pulley, H, both for a balance and to apply a driving belt; and to this pulley, which is provided with a wrist pin, I, a connecting rod, K, is attached, said rod being connected at the other end with a balance-lever, L, which is worked by a treadle, M, for driving the machine with foot power. The pulley D is provided with a crank pin or handle, J, by which the machine may be worked by hand. The shaft E of the lower saw-pulley is mounted on a frame, N, which is pivoted to the main frame at O for vertical adjustment; and it is connected at the other end by adjusting screws P, whereby it is raised and lowered for adjusting the tension of the saw. The upper shaft G is mounted on a frame, Q, arranged to slide on the main frame in a direction perpendicular to the axis of said shaft, for adjusting the saw to work vertically or obliquely, whereby it will cut square or beveling. Said frame is adjusted by the screw R. The side guides S for the saw are arranged for sliding along in grooves in the upper surface of the table, to be shifted with the saw as it is adjusted, as above described, for square or bevel sawing, the said guides being slotted, and held by clamp screws T passing through the slots, and screwing into the table, which screws are unscrewed to allow of moving said guides, and screwed down again to hold them fast. The side guides S, in the vertically-adjustable support V, therefore, above the table, are similarly arranged to be shifted with the saw. The back guide W is also arranged in like manner for adjustment, as may be required for wide or narrow saws; and in order that it may not interfere with the side guides S it is sunk in a deeper recess than those for said guides S, and works under them, the recess being filled in flush with the top of the table by a removable piece, X. The work-guide *y* has an arm, *Z*, extending rearward from each end, between the clamping bars *Z'*, and is held in position by them when clamped upon said arms by screws in such manner that the guide may readily be adjusted for parallel or tapering work. Below this work-guide a piece, X', of the table, fronting each hole through said table for the saw, is arranged for being readily removed when the work-guide is taken off to put on or take out the saw. These several devices and arrangements the roof constitute a very efficient and desirable machine.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of saw-shafts E G, provided with driving-pulleys F H, and having foot-power apparatus I K L M, and hand-crank pin J, all substantially as specified.

SAFARYNE W. NYCE.

Witnesses:

GEORGE AMMERMAN,

JAMES MILLHAM

'62.'

B. H. OTIS,

Improvement in Spring Bed Bottoms.

No. 122,645. Patented Jan. 9, 1872.

Fig. 1.

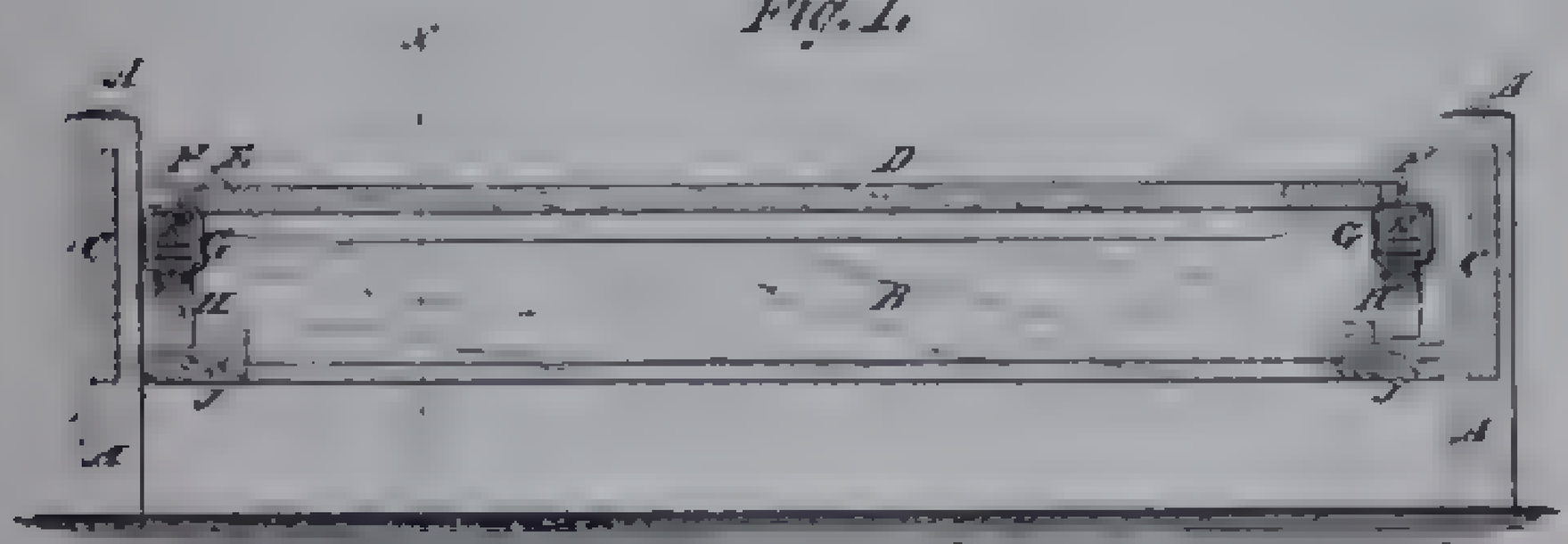


Fig. 2.

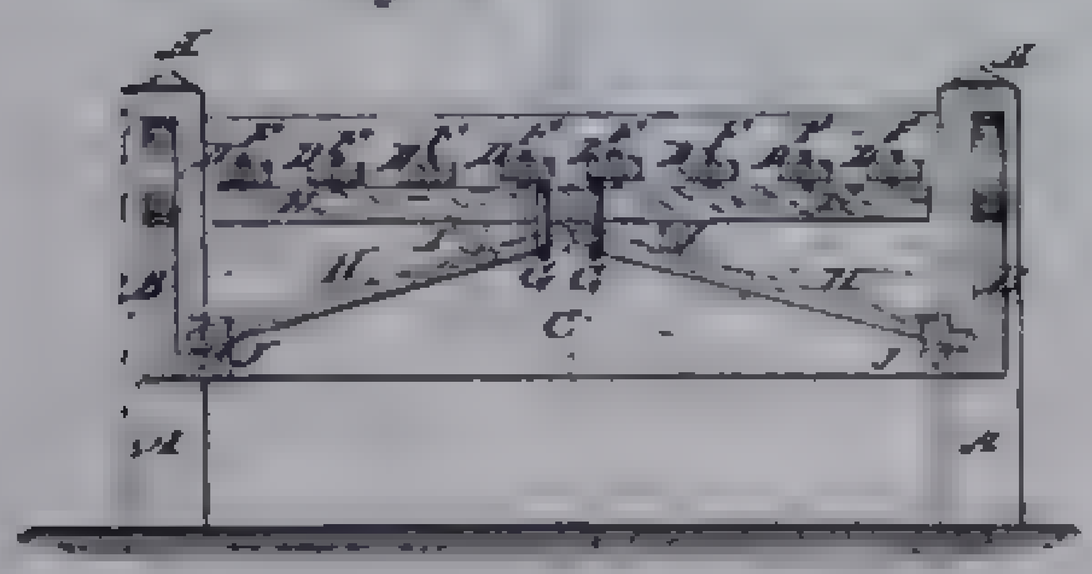


Fig. 3.

Witnesses:

P. C. Dieterich.

[illegible] McArdle

Inventor:

B. H. Otis

Per Munn & Co

Attorneys.

122,045

UNITED STATES PATENT OFFICE.

BENJAMIN H. OTIS, OF HAVANA, ILLINOIS, ASSIGNOR TO HIMSELF, M. D. RHAME AND THOMAS COVINGTON, OF SAME PLACE.

IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. 122,045, dated January 9, 1872

Specification describing a certain improvement in Spring Bed-Bottoms, invented by BENJAMIN H. OTIS, of Havana, in the county of Mason and State of Illinois

Figure 1 is a vertical longitudinal section of a bedstead to which my improvement has been applied, taken through the line *x x*, Fig. 2. Fig. 2 is a vertical cross-section of the same taken through the line *y y*, Fig. 1. Fig. 3 is a detail perspective view of the end part of one of the longitudinal slats.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved spring bed-bottom, simple in construction, effective and reliable in use, and not liable to get out of order, and it consists in the construction and combination of the various parts of the spring bed-bottom, as hereinafter more fully described.

A represents the posts, B the side rails or boards, and C the end rails or boards of the bedstead, about the construction of which parts there is nothing new. D are the longitudinal slats upon which the bedding rests. The ends of the slats D rest upon cross-bars E, and are slotted to receive the pins F attached to said cross-bars at suitable distances apart to keep the said slats in their proper relative positions while allowing them to yield to the pressure of the weight resting upon them. Around the middle parts of the cross-bars E are placed square rings or loops G, into the lower parts of which are inserted the inner ends of two springs, H. The ends of the springs H are grooved transversely upon both sides to prevent them from slipping out of the loops G, and so that the said springs may be turned over should they become permanently bent or set. I are blocks, which are attached to the under sides of the cross-bars E, to serve as fulcrums for the lever-springs H. The fulcrum blocks I should be notched or flanged to prevent the springs H from slipping from them. The outer ends of the springs H rest in sockets or upon cleats J formed in or attached to the side boards B of the bedstead. If desired, the position of the cross-bars E, loops G, fulcrum-blocks I, and lever-springs H, may be reversed or inverted. In this case a second cross-bar should be placed upon the outer and upper ends of the springs H, to receive and support the ends of the longitudinal slats D, the pins F being attached to the said second cross-bar.

I do not claim supporting a bed bottom by means of diagonal springs, nor do I claim longitudinal slats provided with slots to adapt them to fit over pins set in cross-bars; but

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

The bed bottom formed by the two end cross bars E E, provided with pins, the longitudinal spring slats having end slots, the spring levers H H, loops G G, and fulcrum blocks I I, all constructed, arranged, and operating, as herein shown and described, for the purpose specified.

BENJAMIN H. OTIS.

Witnesses:
S. FRANKENFIELD,
LEWIS ROSS.

(62)

No. 122,646. *Charles Palmer's*

Carriage Wheel.

Patented Jan. 9, 1872.

Fig. 1

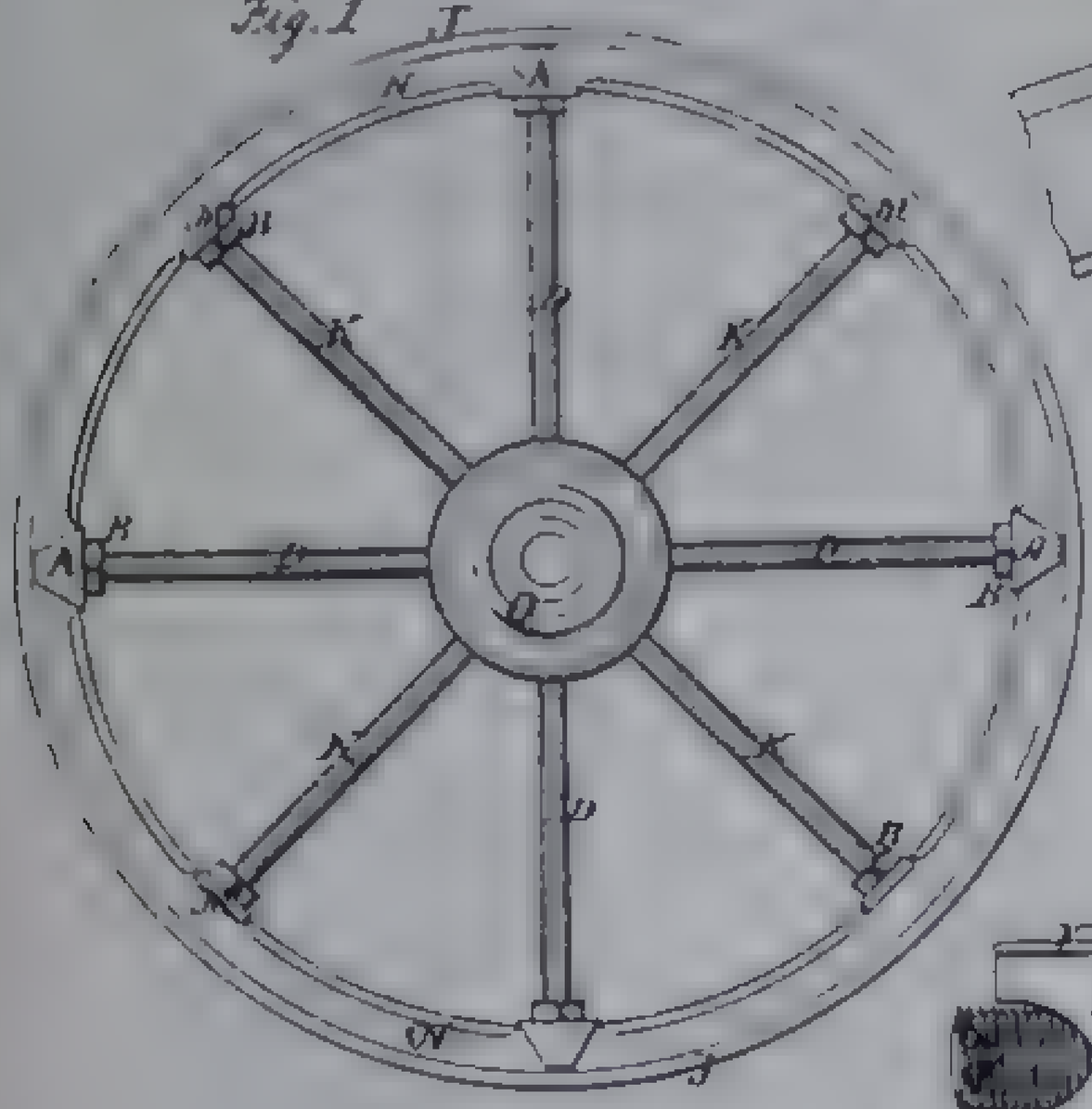


Fig. 2.

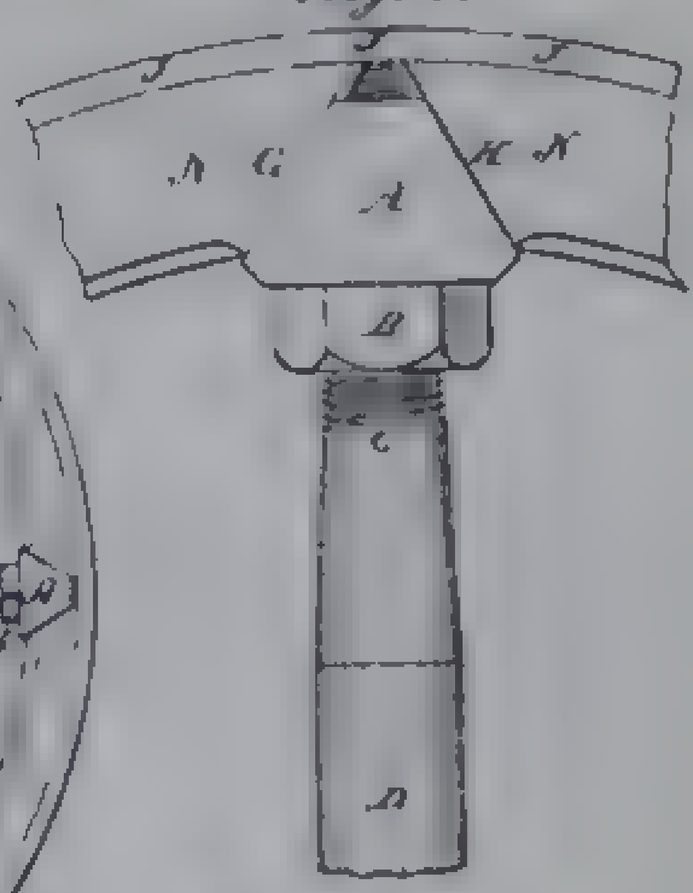


Fig. 5

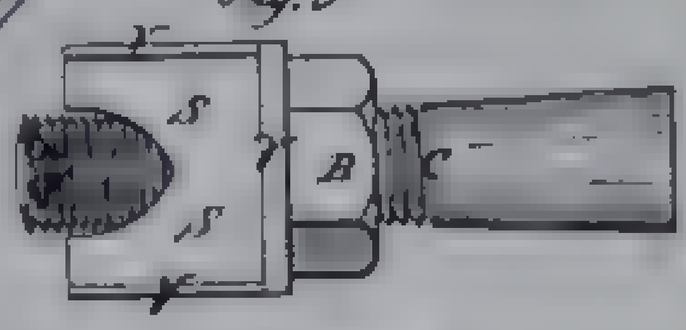


Fig. 4.

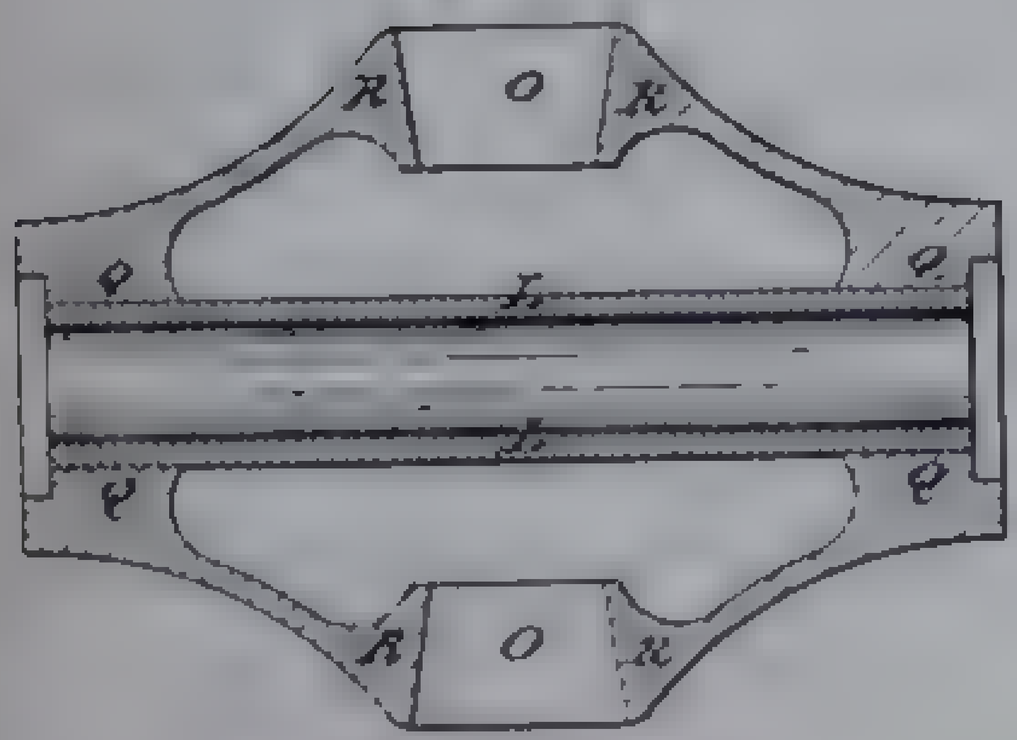
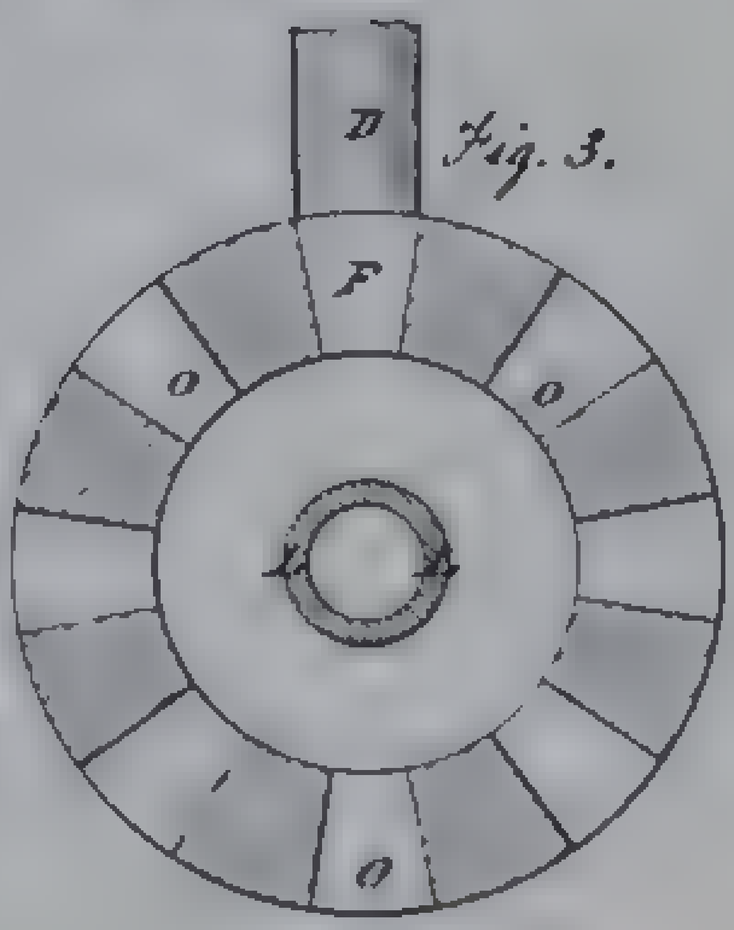


Fig. 3.



Witnesses.

Inventor.

Charles Palmer.

By Niles Whitmore

his attorneys.

122,646

UNITED STATES PATENT OFFICE.

CHARLES PALMER, OF HAMILTON, NEVADA.

IMPROVEMENT IN CARRIAGE-WHEELS.

Specification forming part of Letters Patent No. 122,646, dated January 9, 1872.

To all whom it may concern:

Be it known that I, CHARLES PALMER, of Hamilton, in the county of White Pine and State of Nevada, have invented a new and useful Adjustable Carriage-Wheel; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is an elevation of a carriage-wheel constructed in accordance with my invention. Fig. 2 is a detached sectional view of a spoke and felly. Fig. 3 is a transverse section of the hub. Fig. 4 is a longitudinal section of the same; and Fig. 5 is a detached view of one of the spokes, showing the device by which it is applied to the fellies.

Similar letters of reference indicate corresponding parts in the several figures of the drawing.

My invention has for its object to provide an improved carriage-wheel whose parts can be adjusted at pleasure to compensate for expansion and contraction under the varying influences of the weather, and whereby the fellies are held firmly in place against the tire, and the spokes firmly within the hub. To the accomplishment of these ends, my invention consists, first, in the construction of a screw-socket provided with a nut and wedge, the latter fitting between the adjacent beveled ends of two sections of the felly, the socket being fitted upon the outer end of the spoke, whose inner end rests in a mortise in the metal hub formed to receive it. By adjusting the nut the wedge is forced outward, expanding the fellies—that is to say, moving them circumferentially of the wheel, and consequently tightening them against the tire, and at the same time forcing the inner end of the spoke firmly within the hub. The invention further consists in the combination, with the metallic hub, the adjustable wedges, and the expanding fellies, of intermediate spokes provided with a screw thread, a nut, and washer, whereby, as the nut is adjusted, it forces the washer against the inner face of the fellies, to hold them outward against the tire after they have been moved longitudinally by the adjustment of the wedges.

In the accompanying drawing, Q R is the metallic shell composing the wheel hub, cast with mortises O for the spokes and provided with the pipe-box L. J is the tire of the wheel and N the fellies. The adjacent ends of the felly-sections are beveled inward in opposite directions, as shown at G H, Fig. 2, and against these beveled faces is fitted a metallic wedge, A, which is placed upon the screw-threaded end of a metallic socket, C, which, in its turn, is fitted upon the end of each of the spokes D. The wedge A is provided with flanges V upon its beveled faces, which flanges form sockets S for the reception of the beveled ends of the fellies, to prevent their lateral displacement. The inner ends of the spokes are formed with tenons F which enter the mortises O in the hub, and the metallic sockets C are provided with nuts B under the base of the wedges. By adjusting these nuts the wedges are moved out or in upon the sockets to tighten or loosen the fellies. When the wedges are moved outward they press against the ends of the fellies, moving them circumferentially of the wheel, expanding the diameter of the same, as far as this is possible, within the tire, and consequently holding the latter firmly in place. The adjustment of the nuts also forces the tenons of the spokes within the mortises in the hub, whereby all the parts are tightened and prevented from rattling or being displaced. Each alternate spoke K in the wheel is provided with a nut, H, and washer M in place of the nut and wedge. By adjusting the nut the washer is forced against the inner face of the fellies, holding them firmly outward against the tire after they have been moved longitudinally by the adjustment of the wedges. It will be understood that all the spokes in the wheel are tenoned into the hub, and that the adjustment of the nuts H, whether against the washers or wedges, tightens such spokes in their respective mortises. If desired, the sockets C may be dispensed with and the screw-threads cut directly on the ends of the spokes, which in this case must be made of metal.

By my invention a wheel can be loosened in wet and tightened in dry weather, keeping it at all times in that condition necessary for its preservation, compensating for contraction and expansion and preventing the rattling of the parts by wear or other causes.

ROBERT W. PARK

Vapor Burner

No. 124,151. Patented Feb. 27, 1872.

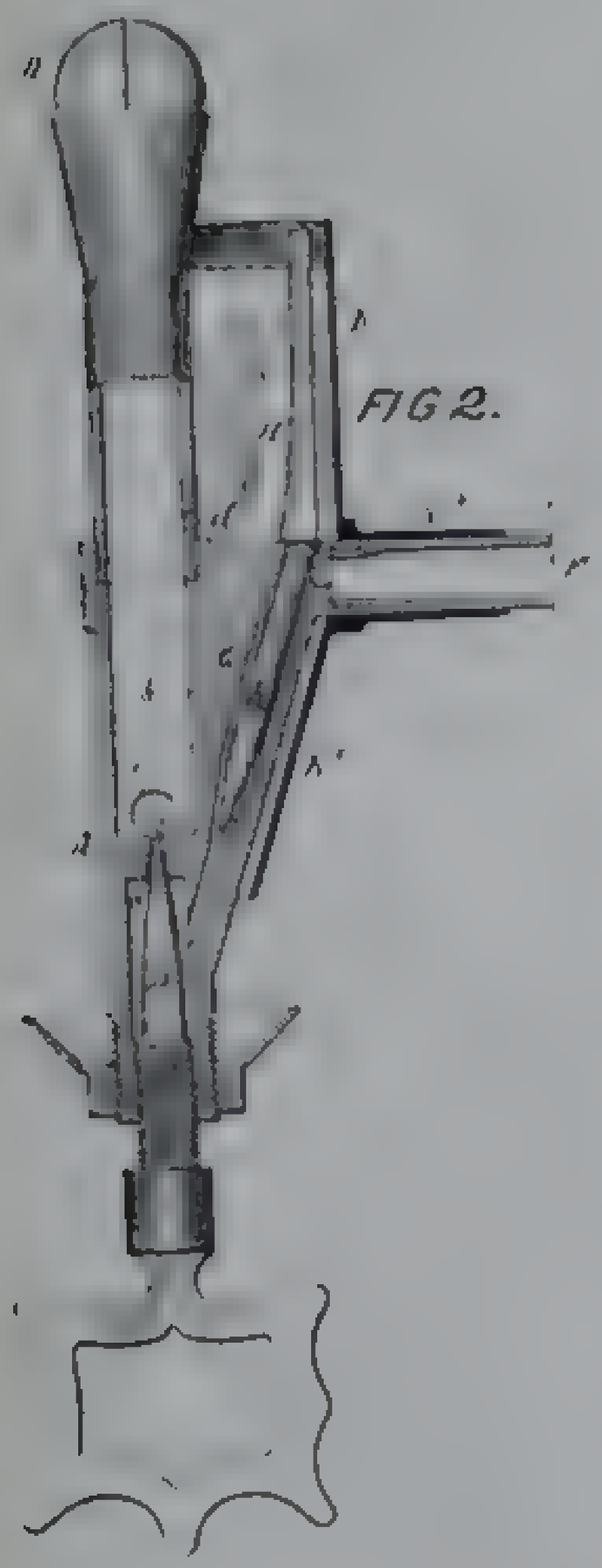


FIG 2.

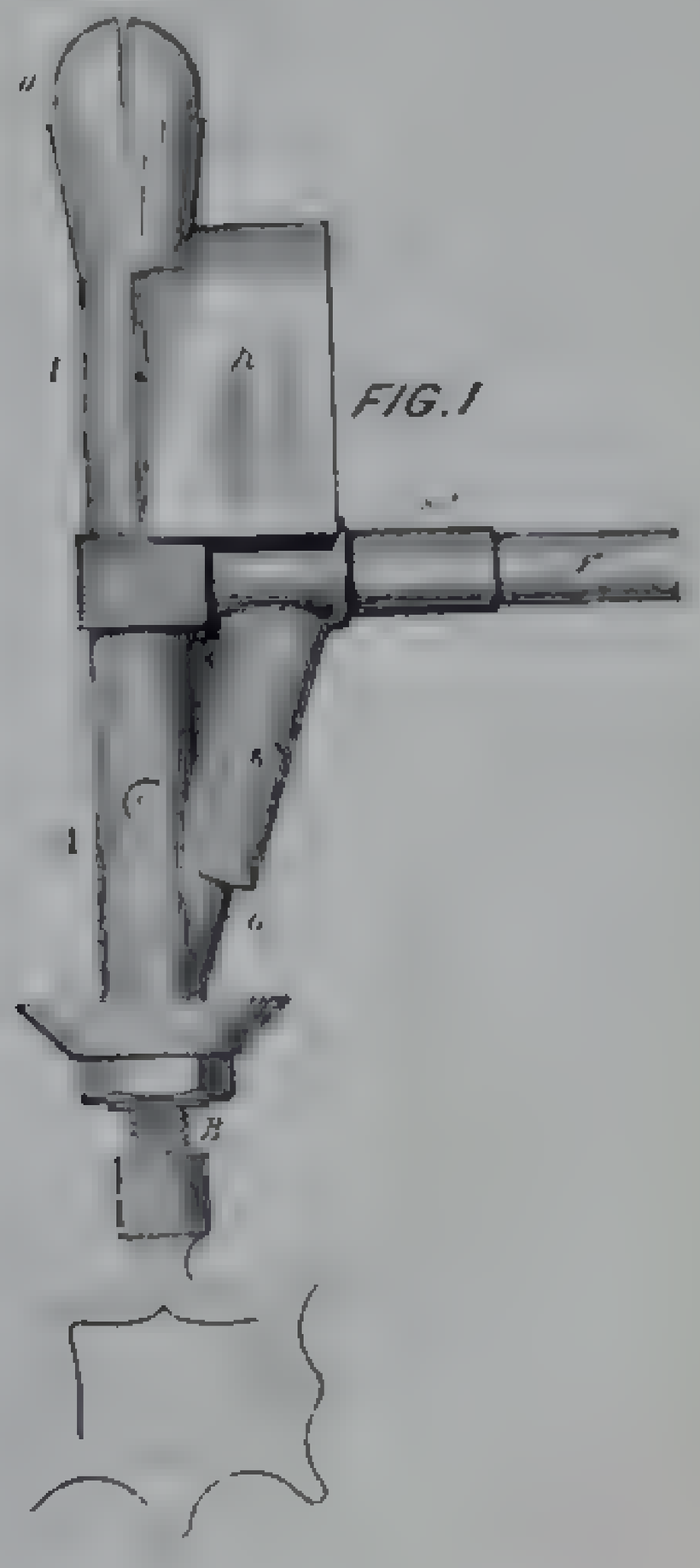


FIG. 1

FIG. 3.

WITNESSES { John Wesley Smith

124,151

UNITED STATES PATENT OFFICE.

ROBERT W. PARK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 124,151, dated Feb[illegible]

Specification describing an Improved Vapor Burner, invented by ROBERT W. PARK, of Philadelphia, county of Philadelphia, and State of Pennsylvania

My invention consists of certain improvements in vapor burners, too fully explained hereafter to need preliminary description, the said improvement being directed to the effect of vaporizing of the hydrocarbon from which the ignitable gas is generated

In the accompanying drawing, Figure 1 is an external view of my improved vapor burner; Fig. 2, a vertical section of the same; and Fig. 3, a transverse section on the line 1 2, Fig. 1

The tubular body A of the burner has at its lower end the usual pointed screw-valve B and seat a', which terminates at its upper end in a small aperture for the escape of the oil or vapor into the mixing-chamber b, the latter occupying the greater portion of the interior of the body of the burner, which is supplied with air at the bottom through openings c, and has at its upper end a tip, D, similar to that of an ordinary gas burner. The supply-pipe F communicates, as usual, with an elevated reservoir containing a supply of light hydrocarbon, and is, in the present instance, [illegible] to the body of the burner and is secured to the same at a point considerably above the lower end of the mixing-chamber b. An inclined tube or passage, G, forms a communication between the supply-pipe and body of the burner beneath the valve-seat, and I prefer, in order that this passage be continually heated, that it should be as close as possible to [illegible] and be cast in one piece with the body of the burner and with the supply-branch, as shown in the drawing. It will be evident, however, that the supply-pipe could be brought close up to the body of the burner and be then bent downward to form the passage G, in which case the latter would be screwed into or brazed to the body of the burner below the seat of the valve. There is an aperture, d, in the side of the mixing-chamber b, an independent jet of ignited gas from which is caused to play upon a wing, H. In the present instance, however, this wing is an extension of a tongue, h, which extends down into the passage G almost to the bottom of the same, and is maintained at a temperature almost as high as that of the wing, the consequence of which is the rapid vaporizing of the hydrocarbon, which, in a thin film, is caused to pass around and in contact with the said tongue in its downward passage through the tube G. The wing, with its tongue h, may be simply driven tightly into the opening formed for it in the top of the supply-pipe, or it may be brazed or otherwise permanently secured to the latter. Another important feature of my invention is the hood or shield K, which extends around the wing H, and overlaps the body of the burner to a slight extent. This hood prevents draughts of cold air from striking the wing, retains a volume of heated air around the latter, and consequently causes the said wing, and its tongue h, to be maintained at a higher temperature than if the said wing were exposed as usual. The hood is in the present instance secured to the burner by a sleeve, K', which extends around the supply-pipe. This sleeve, however, is not essential as a means of supporting the hood, but it serves the more important purpose of conducting heat from the hood to the supply-pipe which it embraces, and of thus partially vaporizing the oil before it enters the tube or passage G. The sleeve K' embracing the [illegible] used in connection with any metal object heated by the flame from the orifice d. There is also a tail-piece k', projecting downward from the sleeve K, and partly embracing the tube G, the purpose of which [illegible] and of thus assuring [illegible] of the oil

I claim as my invention

1. The combination, with a burner, of the tip D, the opening through which issues a supplemental jet of gas, and a plate heated by the said jet, and having a tongue extending into the supply-pipe [illegible], substantially [illegible], and [illegible] the heat [illegible]

2. The combination, as set forth, of the [illegible] and tongue H h, heated by [illegible] flame, the shield K, and the [illegible] the supply-pipe

3. The [illegible] plate H, sleeve K', tube or passage G, and tail-piece k' projecting [illegible], all substantially as specified

In testimony whereof I have [illegible] to this specification in the presence of two subscribing witnesses.

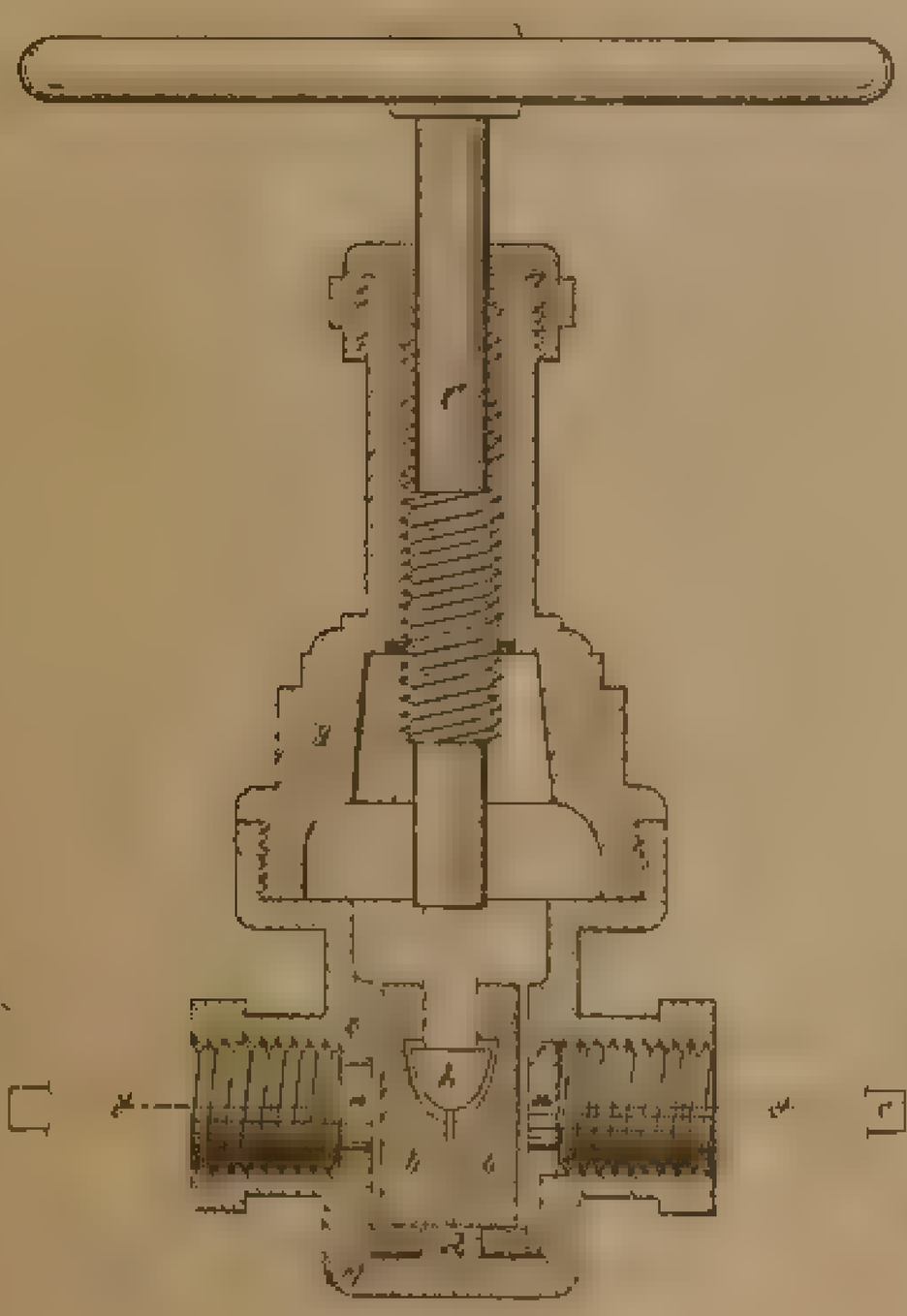
ROBERT W. PARK

Witnesses:
Louis Boswell,
John K. Reppert.

S. J. PEET.

Steam Engine Valves.

No. 4,849. Reissued April 2, 1872.



4,849

UNITED STATES PATENT OFFICE.

SAMUEL J. PEET, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE PEET VALVE COMPANY

IMPROVEMENT IN STEAM-ENGINE VALVES.

Specification forming part of Letters Patent No. 60,921, dated January 1, 1867; reissue No. 4,849, dated April 2, 1872

To all to whom these presents may come.

Be it known that I, SAMUEL J. PEET, late of the city, county, and State of New York, but now of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Valves; and do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a central longitudinal section of my improved valve taken in the plane of the line *x x* of Fig. 2. Fig. 2 is a partial transverse section taken in the plane of the line *y y* of Fig. 1. Fig. 3 is a detached view of the inner face of one of the double valve-plates or disks. Fig. 4 is a similar view of the corresponding valve-plate or disk. Fig. 5 is a detached outside view of the double valve-plates united as employed.

Similar letters of reference indicate like parts.

Prior to my invention there was not, as far as I am aware, in use a stop-valve having two independent disks or gates closing upon two opposite seats.

The disadvantages of a valve having but a single gate are at once obvious; for should any particles of scale or sediment get between the gate and its seat the same would cause the valve to leak. Another disadvantage of a valve with but a single gate is, that the eduction-port of the valve, being always open, the chamber of the valve often becomes filled with sediment to such a degree that the gate becomes clogged and impeded in its operation. Another evil is, that the stem of the valve cannot be packed while under pressure.

By constructing the valve with two independent disks or gates and with mechanism, as hereinafter described, for opening and closing them upon their seats all of these difficulties are obviated.

This invention relates to an improvement in valves for steam, gas, compressed air, heated air or caloric, water or other fluids, where a faucet, gate, valve, or cock are used; and consists in a pair of metal disks loosely hung upon an actuating-stem or rod, and so as to work entirely independently of each other, they being so applied to the said stem as to be controlled in their upward and downward movements by a corresponding movement of the stem; such disks being disposed within a box or shell, and so as to close against seats on their opposite sides by a direct lateral movement, the same being effected by means of a conical wedge or a straight wedge turning on a swivel screwed between the disks, or by a sliding wedge or other equivalent device.

In the said drawing, A represents the shell of the valve; B, the cap, through which passes a screw, C, all of which parts are constructed in the ordinary manner of brass or any other suitable material. *a a* denote the steam or water ways, the same passing in a line through the shell at right angles to the screw C, and having flat seats *e e* on the inside of each. In a cavity in the shell A, between the valve-seats *e e*, two flat valve-plates or disks, *b b*, are placed, so as to be opposite to the steam-ways *a a* when operating to close them, and resting in the middle on a projection, *d*, disposed on the bottom of the aforesaid cavity, by which recesses are formed on each side, in order that the edges of the valve-plates shall not strike and become battered when they are forced into place. The valve-plates *b b* are fitted as male and female to each other on dowel-pins *c c*, as shown in Figs. 3, 4, and 5, and in the inner sides of the valve-plates are corresponding taper recesses *g g*, which receive a conical wedge on the end of the screw C, as seen in Fig. 1. The said wedge is shouldered on the upper side, so as to catch on a corresponding shoulder in the recesses *g g* and lift the two independent valve-plates together from their seats *e e* in front of the steam-ways *a a*. The valve-plates are made to be close together when the wedge *h* is raised, and to play back and forth freely between the valve-seats *e e*; but when the wedge *h* presses against the sides of the recesses *g g* in the valve-plates it spreads them apart and presses their faces in a direct line tightly against the seats *e e* in such manner that steam cannot pass by them either through direct or back action.

It will be observed that with this arrangement of the valve plates they bear upon the seats and are held rigidly, so that the resist

JOHN H. POWER.

Improvement in Bed Bottoms.

No. 123,046. Patented Jan. 23, 1872.

Fig 1.

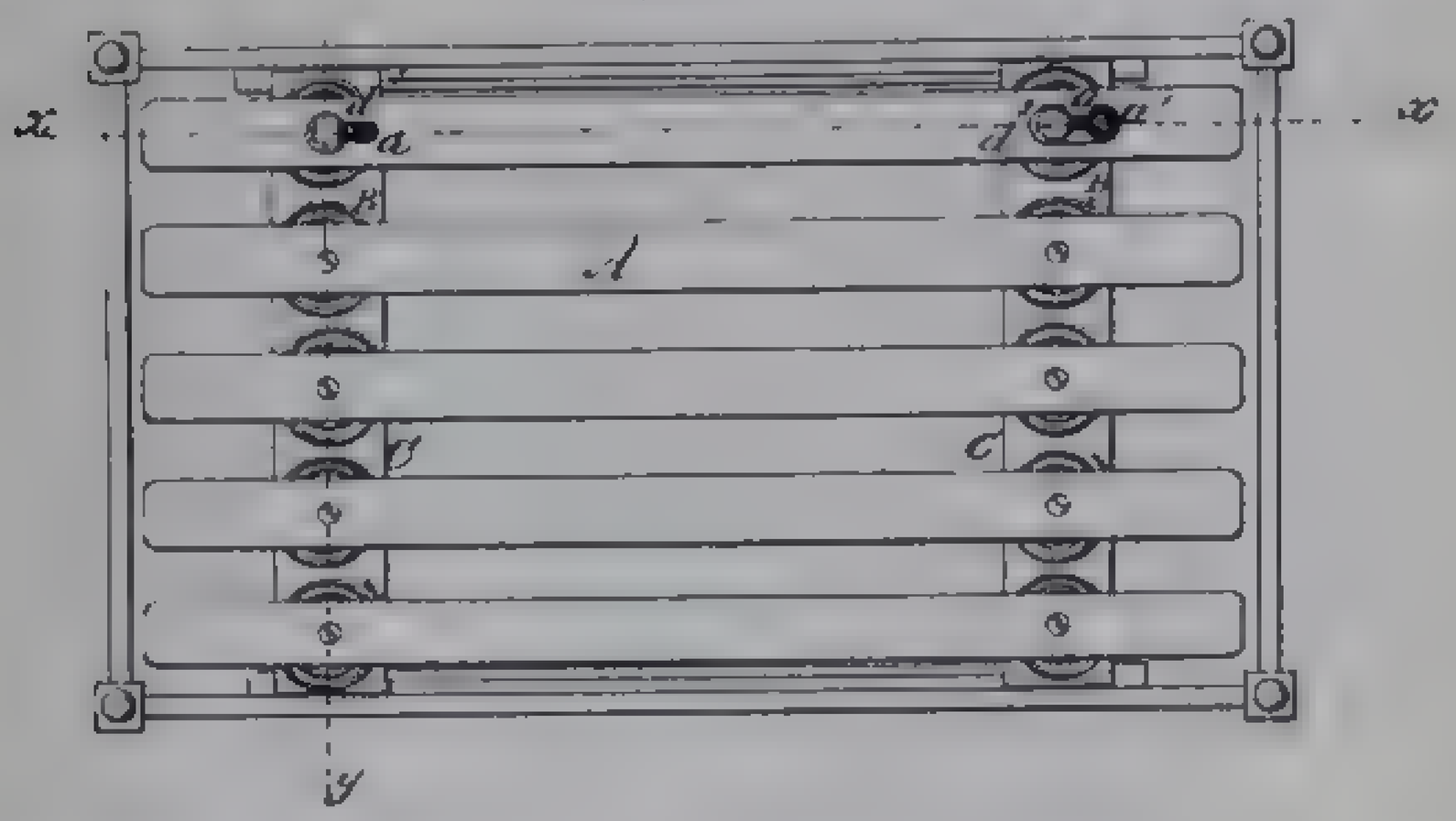


Fig 2

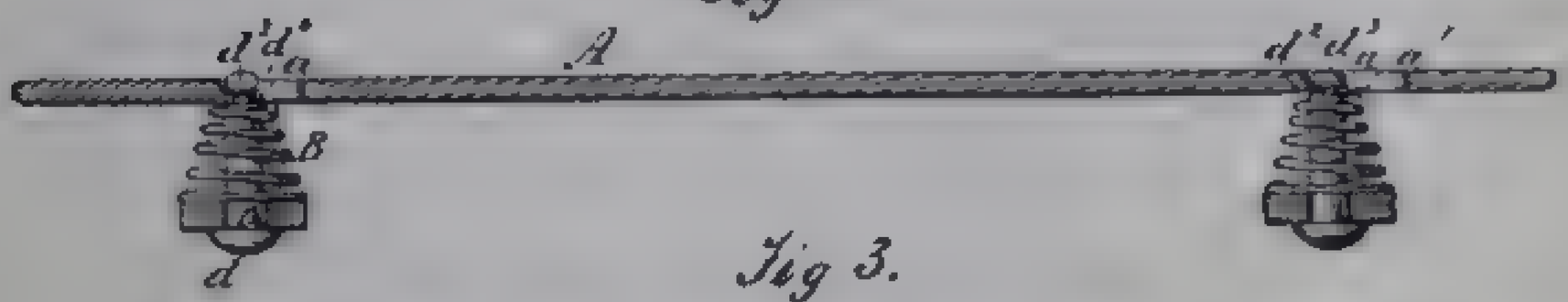
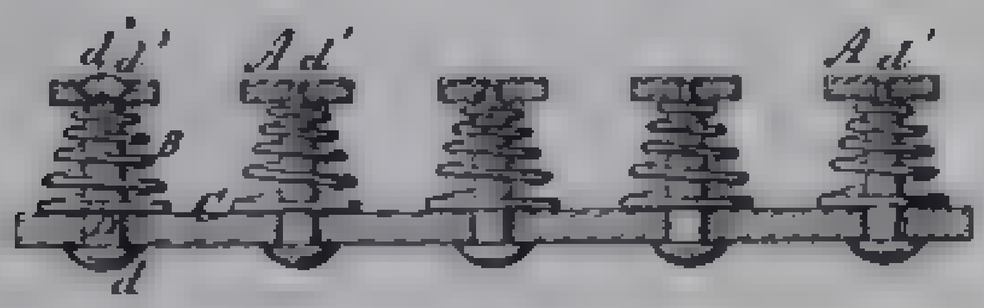


Fig 3.



Witnesses
A. Ruppert Jr.
C. Edwards Leib

Inventor:
John H. Power
Edson & Brett
Attorneys

123,046

UNITED STATES PATENT OFFICE.

JOHN H. POWER, OF BURLINGTON, IOWA.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. 123,046, dated January 23, 1872

Specification describing certain Improvements in Bed Bottoms, invented by JOHN H. POWER, of Burlington, in the county of Des Moines and State of Iowa

This invention relates to that class of bed bottoms in which the slats sustaining the mattresses are borne upon springs; and my improvement consists in confining the springs between the abutment bars and the yielding slats by means of bolts or tie-rods, which are passed from beneath through suitable apertures in the abutment bars and through the coils of the springs, and then fastened to the slats, slightly compressing the springs so as to hold them in proper position without any fastening of their ends to either the abutment-bars or the slats. It further consists in so fastening the said bolts or tie-rods to the slats that they may be readily detached and again put together.

Figure 1 is a plan view of a bedstead embodying my improvements in bed-bottoms. Fig. 2 is a vertical section of my improved bottom on line *x x* of Fig. 1. Fig. 3 is a vertical section thereof on line *y y* of Fig. 1.

The same letters of reference are employed in all the figures in the designation of identical parts.

The several slats A A are independent of one another, as shown clearly in Fig. 1, and the action of one of them will therefore not affect any of the rest, avoiding thus the objectionable inclination given to spring bed-bottoms of the ordinary kind when subjected upon one side to a weight unequal to that resting upon the other. Each individual slat is borne upon springs B B placed under it, one near each end, and these springs are, in turn, supported upon the fixed abutment-bars C C, which are arranged transversely to the slats, and are made of the proper length to fit between the sides of the bedstead to be sustained upon cleats thereon. The springs shown are of the volute kind, but others with circular coils, such as the spiral or hour-glass springs may be used instead, if preferred. They are confined between the fixed bars C and the slats A by means of the bolts or tie-rods D, which are made of such a length between the heads or shoulders at the ends that when the parts are properly connected together, as best seen in Figs. 2 and 3, the springs will be slightly compressed, and its lateral shifting prevented, so that in consequence of being compelled to act in a perpendicular direction it is less liable to be bent or broken. Each bolt is passed up through the bar C and its respective spring until its head *d* comes in contact with the bar C; the slat is then placed on its upper end and secured so as to slightly compress the springs, as above stated, dispensing with all other fastenings of the springs. The slats may be fastened to the bolts by screws d^3, as shown, or by forming a short shank, d^2, on the upper end of the bolt, which shank, passing through a narrow slot, *a*, in the slat, terminates in a head, d^1, which may be of the elongated form shown on the left side of Fig. 1, or of the circular form shown on the right side of Fig. 1. When made of the elongated form, the bolt, after passing its upper head through the slot in the slat, is turned a quarter of a revolution to arrange the head transversely over the slot; and when said head is made of circular form, the slot *a* in the slat is enlarged at *a'* to permit the head to pass through it at that point, when, by moving the slat endwise, its head is brought over the narrow portion of the slot *a*.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the slats A *a*, tie-rods D d^2 d^3, springs B, and abutment-bars C, substantially in the manner herein shown and described, and for the purpose specified.

In testimony whereof I have hereunto signed my name this 21st day of November, A. D. 1871, in presence of two subscribing witnesses

JOHN H. POWER.

Witnesses:

L. B. POWER,

R. S. M'ENTIRE.

H. R. RICHMOND.

No. 124,085.

Improvement in Dish Drainers.

Patented Feb. 27, 1872.

Fig. 1.

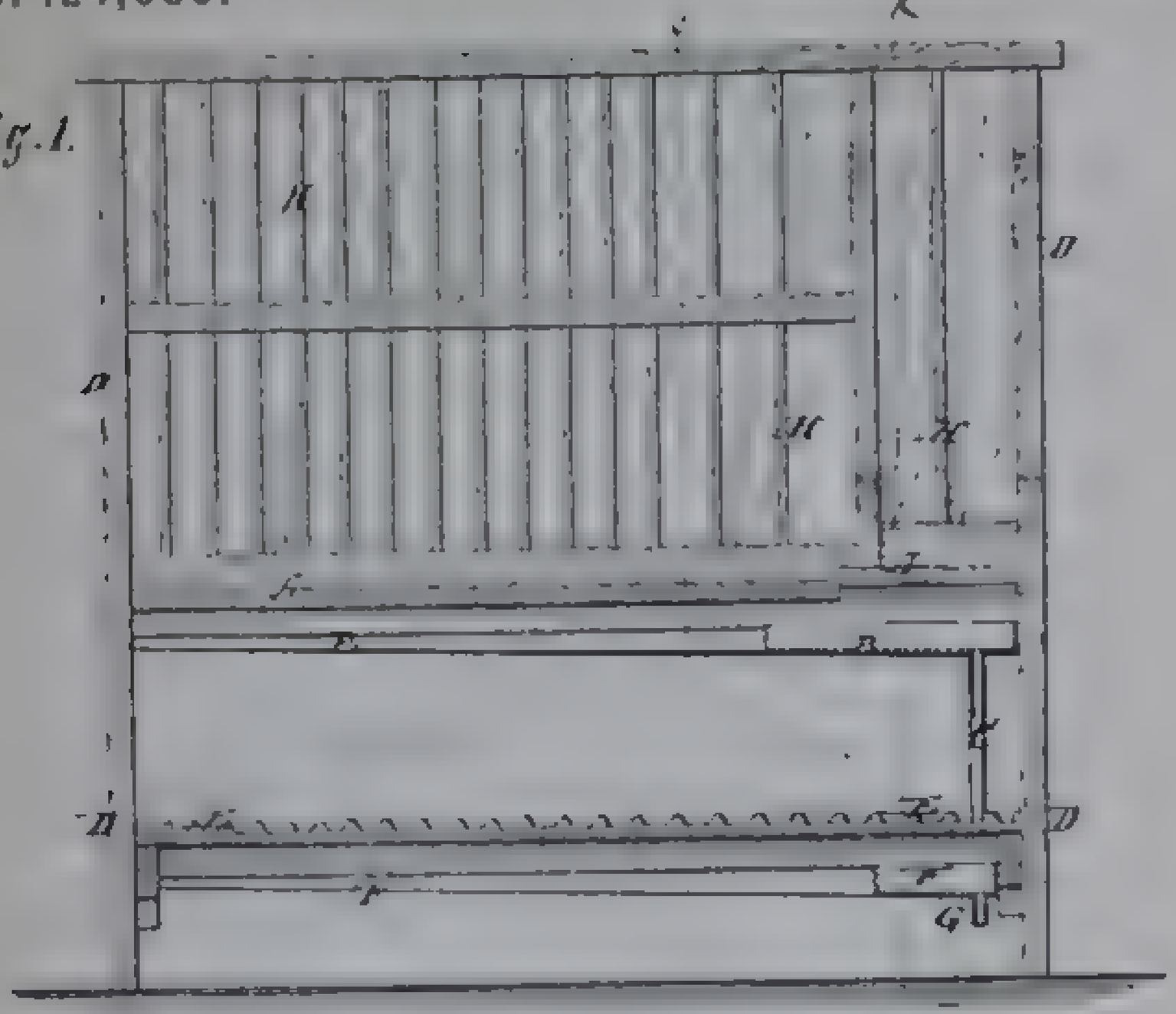
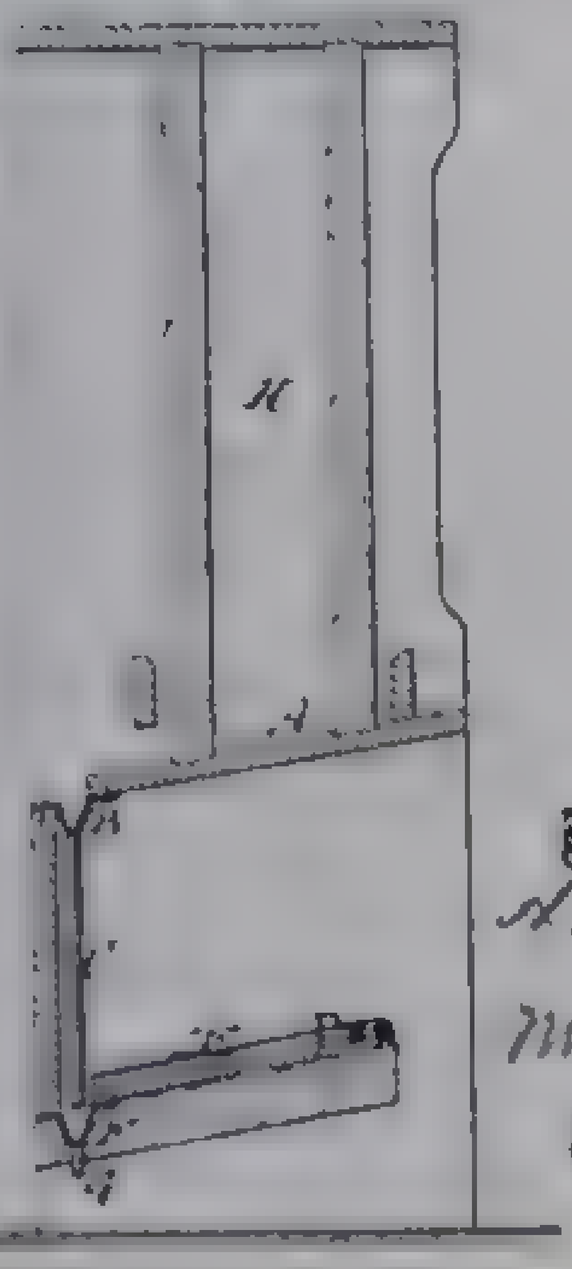


Fig. 2.

Fig. 3.



Witnesses:

Inventor:

Attorneys.

124,085

UNITED STATES PATENT OFFICE.

HENRY R RICHMOND, OF NEW PLYMOUTH, NEW ZEALAND.

IMPROVEMENT IN DISH-DRAINERS.

Specification forming part of Letters Patent No. 124,085, dated February 27, 1872.

To all whom it may concern:

Be it known that I, HENRY R. RICHMOND, of New Plymouth, New Zealand, have invented a new and improved Dish-Drainer; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

Figure 1 represents a front elevation, partly in section, of my improved dish drainer. Figs. 2 and 3 are vertical transverse sections of the same taken on the planes of the lines *e e* and *f f*, Fig. 1, respectively.

Similar letters of reference indicate corresponding parts.

This invention relates to a piece of kitchen furniture to be used for holding dishes, plates, pots, and all other crockery-ware, after washing and properly rinsing the same in clean water. It consists in the general arrangement of parts, as hereinafter more fully described.

The upper portion of the dish-drainer consists of a rack, H, substantially similar to an ordinary plate and dish rack. The drippings from the plates and dishes placed in the rack fall upon an inclined board, marked A A, in the accompanying drawing. This board slopes down toward the back, and to its lower edge is fixed a sloping gutter, B. The drippings pass from the lower end of this gutter into a pipe, C, to be discharged, as hereinafter stated. The upright boards D D D D, which form the sides of the dish rack, are continued below it, and support a shelf, E E, which is fixed to them at a sufficient distance below the board A A to allow any ordinary article of crockery ware or glass, such as cups, tumblers, jugs, basins, &c., and metal goods, such as teapots, &c., to stand on the shelf E E to drain. The shelf E E, like the board A A, slopes down toward the back, where a second gutter, F F, is fixed, leading to a discharge-pipe, G. The upper surface of the sloping shelf E E is grooved transversely, the grooves being either flat or curved at the bottom, and being at any convenient distance apart—say about one inch from center to center—and the ridges left between the grooves are rounded or beveled off at the top so as to allow the water to run off freely into the grooves from articles placed on the shelf to drain. This shelf is braced underneath to prevent warping.

The pipe C, taking the drainings from the plates and dishes, discharges into the lower gutter F, so that the lower discharge-pipe G receives and discharges all the drainings, both from the plate and dish-rack and from the draining-shelf. The water discharged from the pipe G can either be received in a suitable vessel placed underneath it, and emptied away from time to time, or it may be led off by a pipe passing through the wall of the house, or united by a pipe or gutter to a sink or drain.

The drainer is designed to be attached to the wall of the kitchen or other wash room, and preferably above the table upon which the crockery is to be washed, so that it may be conveniently accessible.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The dish-drainer consisting of the rack H, inclined board A, sloping gutter B, shelf E, and sloping gutter F, all combined substantially as herein shown and described.

HENRY R. RICHMOND

Witnesses:
W. HAIRE,
Notary Public, New Plymouth, N. Z.
JOHN ELLIS,
Law Clerk, New Plymouth, N. Z.

(91.)

J. G. ROTH.

Improvement in Wringing Machines.

No. 122,659. Patented Jan. 9, 1872.

Fig. 1.

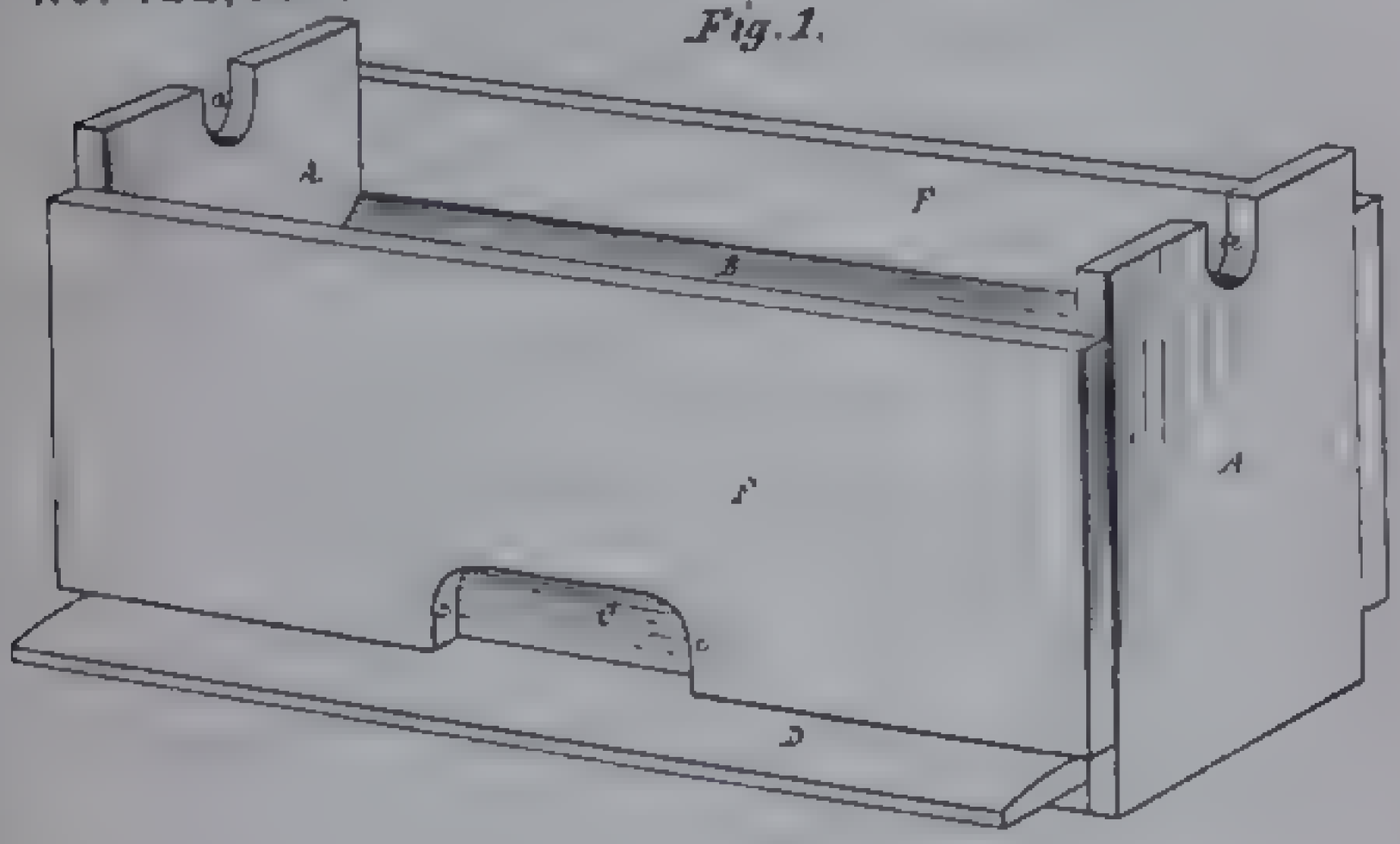
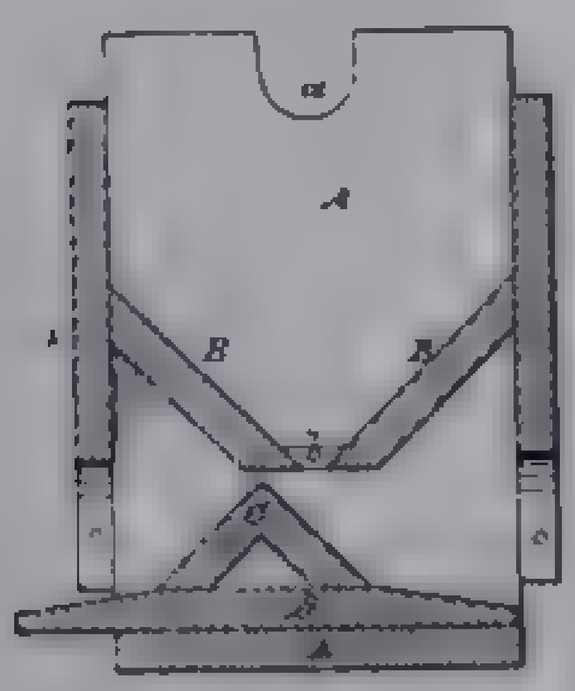


Fig 2



Witnesses

C. F. Arthurholme

E. C. Ellis

Inventor

John G. Roth

by Atty N. Bellis

122,650

UNITED STATES PATENT OFFICE.

JOHN G. ROTH, OF NEW YORK, N. Y., ASSIGNOR TO THE METROPOLITAN WASHING MACHINE COMPANY, OF MIDDLEFIELD, CONNECTICUT.

IMPROVEMENT IN WRINGING-MACHINES.

Specification forming part of Letters Patent No. 122,650, dated January 9, 1872.

To whom it may concern:

Be it known that I, JOHN G. ROTH, of the city, county, and State of New York, have invented certain new and useful Improvements in Clothes-Wringers, of which the following is a specification:

The object of my invention is to provide means for discharging the water squeezed from the clothes passing through the wringer-rolls from one to the other side of the machine, according to the position of the tub or other vessel for the reception of the water, and thus to prevent the water from accidentally escaping and falling on the floor. My invention consists in the employment in the frame of the wringer, below the rolls, of two downwardly-inclined converging dripping-boards, or their equivalents, in combination with a movable guide or partition located below said boards, and so arranged that it may be shifted to one or the other side of the space or opening between the lower ends of the same, for the purpose of directing the water falling through said opening to one or the other side of the machine as desired.

The manner in which my invention is or may be carried into effect can readily be explained and understood by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of so much of the lower portion of the frame of a wringer as is necessary to illustrate my invention. Fig. 2 is a transverse vertical section of the same.

A represents the wringer-frame, and a the bearings in which the shaft of the lower roll is supported. At a suitable distance below the lower roll I arrange two downwardly-inclined converging dripping-boards, B B, which are secured firmly to the wringer-frame, and are so arranged as to have between their lower ends a central space or opening, *b*, through which the water falling upon either or both dripping-boards, will pass. I thus concentrate the flow of water at one point, and, in order to effect the discharge of this water from one or the other side of the machine at pleasure, I arrange below the said opening a movable guide or water-shed, which can be shifted so as to cause the water to pass from either side of the machine. The device in the present instance consists of a double-inclined shed, C, secured to the bottom-board or plate D, which rests loosely upon a support, E, or is otherwise arranged in the frame, so that it may slide back and forth, in order to shift the position of the shed C to either side of the opening *b*. The board D projects some distance beyond the frame of the wringer, for the purpose of allowing it to be easily adjusted. For instance, when the shed is in the position shown in Fig. 2, the board will project some distance on the left of the machine; if it be desired to shift the position of the shed, the projecting part of the board is pushed in, and in its sliding movement will carry the water-shed over to the other side of the opening *b*, thus changing the direction of the flow of the water. In lieu, however, of having the board to thus project bodily beyond the wringer frame, projecting knobs, pins, or handles may be substituted, by means of which the adjustment of the sliding water-shed can be effected. I prefer, on the whole, the arrangement of the shed so that it shall slide; but it is manifest that the same effect may be produced by placing a hinged or tilting board or shed beneath the opening *b*, which may be inclined in one direction or the other, so as to direct the water to either side of the machine. In lieu of the double-inclined sliding shed, a simple upright partition board, mounted on the sliding support D, may be used; but I prefer the arrangement first mentioned.

With the devices above described I prefer to use on each side of the machine a shield, F, with a central perforation or opening, *c*, for the purpose of discharging the water at a point when the wringer most overhangs the tub or other vessel provided to receive the water.

When the wringer is in use, no matter in which direction the rolls revolve, the water from them will be caught by the converging dripping-boards B, and will be directed to the central opening *b*. By shifting the position of the shed C to one side or the other of this opening, the water will be guided toward and caused to escape from either side of the wringer, as preferred.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The downwardly-inclined, converging, stationary dripping-boards, arranged in the

CHARLES C. SHELDON.

Improvement in Clothes Driers.

No. 123,051. Patented Jan. 23, 1872.

Fig. 1.

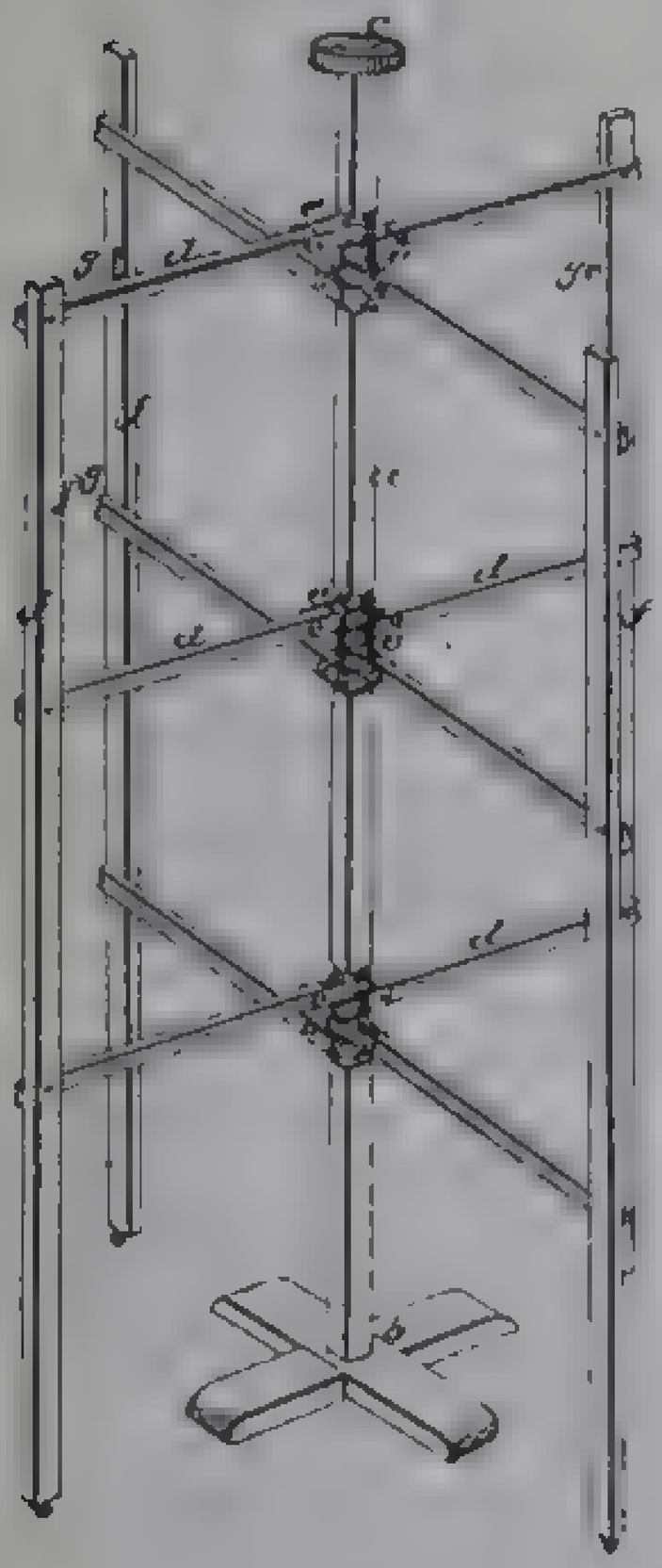


Fig. 2.

Fig. 3.

Witnesses.
C. F. Brown
E. G. Brown

Inventor.
Charles C. Sheldon,
by Geo. E. Brown,
Atty.

123,031

UNITED STATES PATENT OFFICE.

CHARLES C. SHELDON, OF RANDOLPH, NEW YORK.

IMPROVEMENT IN CLOTHES-DRIERS.

Specification forming part of Letters Patent No. 12[illegible]31, dated January 23, 1872.

Specification describing certain Improvements in Clothes-Driers, invented by CHARLES C. SHELDON, of Randolph, Cattaraugus county, New York.

Figure 1 is a perspective view, showing the arms horizontal; Fig. 2 is a similar view, showing the arms hooked up; Fig. 3 is a top view, illustrating the swing of the arms; and Fig. 4 is a transverse section of one of the arms.

This invention relates to a clothes-drier consisting of a main post, to which are jointed any desired number of radial swinging arms, which are connected, in two or more vertical series, with side standards that are articulated to the outer ends of said arms; the inner ends of the same being also articulated to the eyes that connect them with the main post, so that the outer ends of the arms can be elevated, and thus carry the standards in close to the main post when it is desired.

Reference to the drawing, *a* is the main post aforesaid, the same being stepped in a foot, *b*, and having attached to its top a slotted ring, *c*. The radial arms *d*, at their inner extremities, are jointed to eyes *e*, that sit loosely in grooves in the main post, so that the arms *d* may be swung horizontally in order to place them in any desired position—for instance, all within an arc of ninety degrees—the main post occupying the corner of a room. The standards *f* at the outer ends of the vertical sets of arms *d* are also jointed to them, so that said standards, by raising the outer ends of the arms, can be swung upward and inward close to the main post, still preserving their perpendicularity, and thus enabling the apparatus to be closely packed. The standards *f* are furnished with hooks *g*, by connecting which with the slotted disk *c* the standards are held in the position last described. The standards are also provided with casters, so that they can be moved laterally without lifting them from the floor. As shown in Fig. 4, the arms *d* are each constructed with a bead, *h*, along its upper edge, and recesses *i* along each side beneath the bead. This construction causes the clothes-pins to hold the clothes more firmly on the arms.

I claim as my invention—

The main post *a*, eyes *e*, arms *d*, standards *f*, disk *c*, and hooks *g*, combined as specified.

CHAS. C. SHELDON

Witnesses:
GEO. E. BROWN,
J. E. HENREY.

L. THOMAS & JOHN A. KURTZ.

Improvement in Bed Bottoms.

No. 123,062. Patented Jan. 23, 1872.

Fig. 1

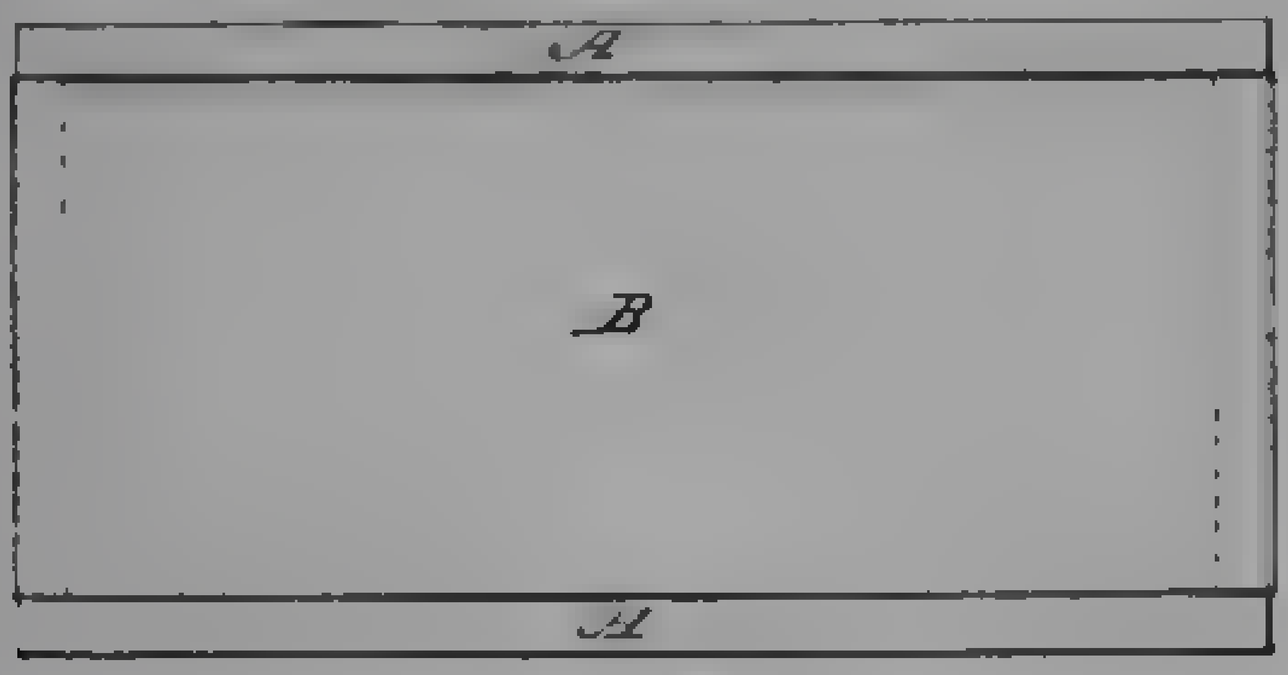


Fig 2

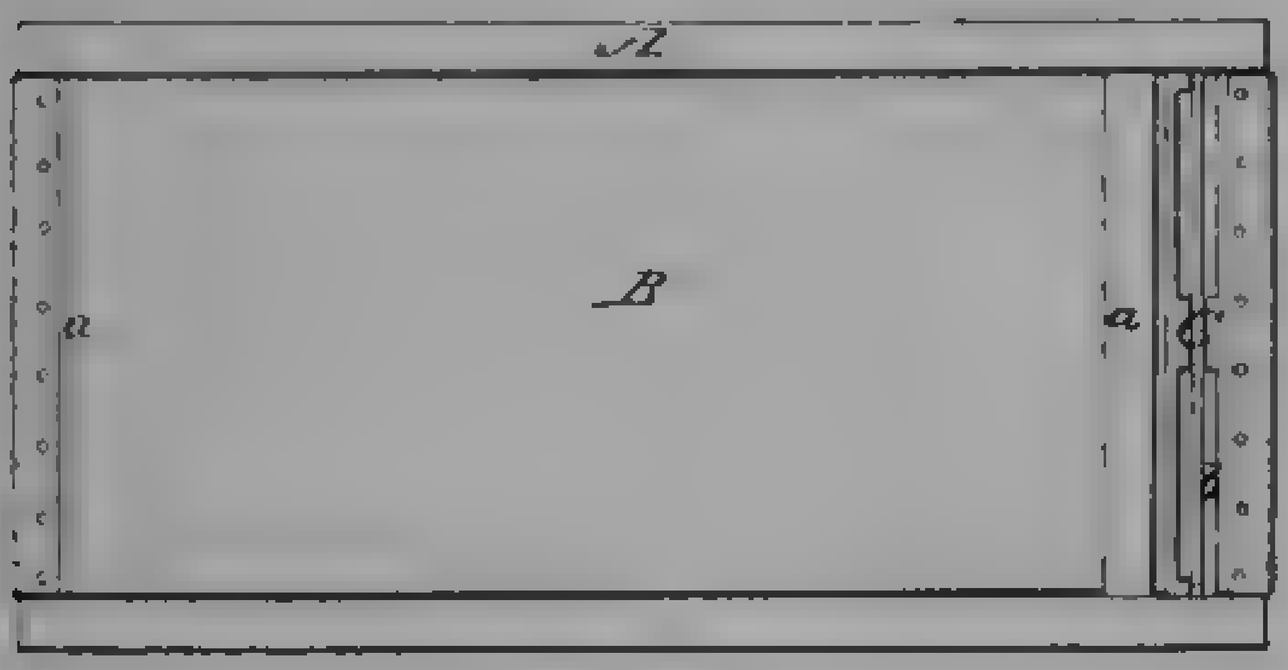


Fig 3

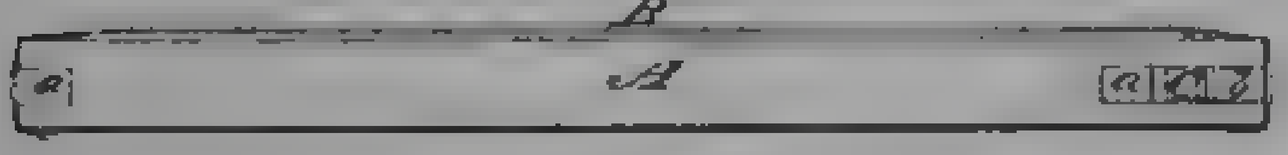
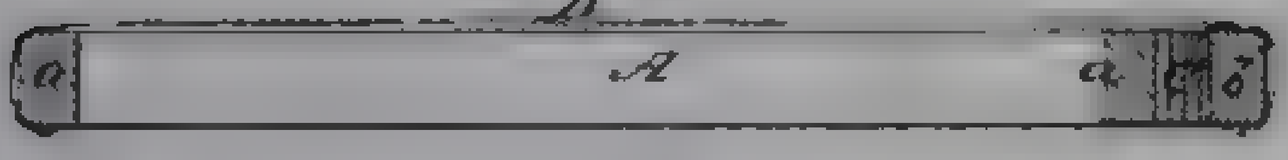


Fig 4



Witnesses.
P. Campbell
J. Jr. Campbell

Inventor
Lewis Thomas
John A. Kurtz
by their Atty
Maud Pennock Hance

123,062

UNITED STATES PATENT OFFICE.

LEOPOLD THOMAS AND JOHN A. KURTZ, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN BED-BOTTOMS.

Specification forming part of Letters Patent No. 123,062, dated January 23, 1872.

To all whom it may concern:

Be it known that we, LEOPOLD THOMAS and JOHN A. KURTZ, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and improved Bed-Bottom; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a top view of the bed-bottom. Fig. 2 is a bottom view thereof. Fig. 3 is a side view. Fig. 4 is a section taken longitudinally through the center of the bed-bottom.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to portable bed-bottoms, and is designed to furnish a light and cheap article which will afford considerable elasticity. Our object is to employ, in combination with a rectangular frame or stretcher and wood, metal, or other suitable springs, a longitudinal sheet of strong paper or leather, in the manner hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A A represent two longitudinal rails or bars, and *a a* two cross-bars, which are all formed together in a rigid manner so as to form a stretcher or frame for receiving the flexible material B constituting the bed-bottom proper. One of the cross-bars *a* is mortised into the rails A A so as to leave portions of the latter extending beyond it, which portions are slotted horizontally, as shown in Fig. 3. A cross-bar, *b*, has its reduced ends fitted loosely into said slots so that this bar will move longitudinally with respect to the length of the rails A A, and between this movable bar *b* and the fixed bar *a* springs C are interposed, the reduced ends of which are received into the slots in the rails A, which keep these springs in their places. The springs may consist of thin strips of wood or metal with spacing-pieces applied between them at their ends and also at the middle of their length alternately; or, these springs may be of the helical kind; or, finally, they may be of India rubber.

Having thus constructed the foundation of our bed-bottom, we take a sheet of strong paper or leather and fasten one of its narrowest ends to the cross-bar *a* furthest from the springs C. The opposite ends of this sheet is then secured to the movable bar *b* with the springs under tension. When the bar *b* is released the springs recoil and draw the sheet B tightly in a longitudinal direction. The sheet will in this way be kept under constant tension, and the springs will yield when a weight is upon the sheet B, and thus afford great elasticity thereto.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The new article of manufacture, herein described, consisting of the frame A *a*, the flexible sheet B, the movable bar *b*, and the springs C, as herein described.

LEOPOLD THOMAS.
JOHN A. KURTZ.

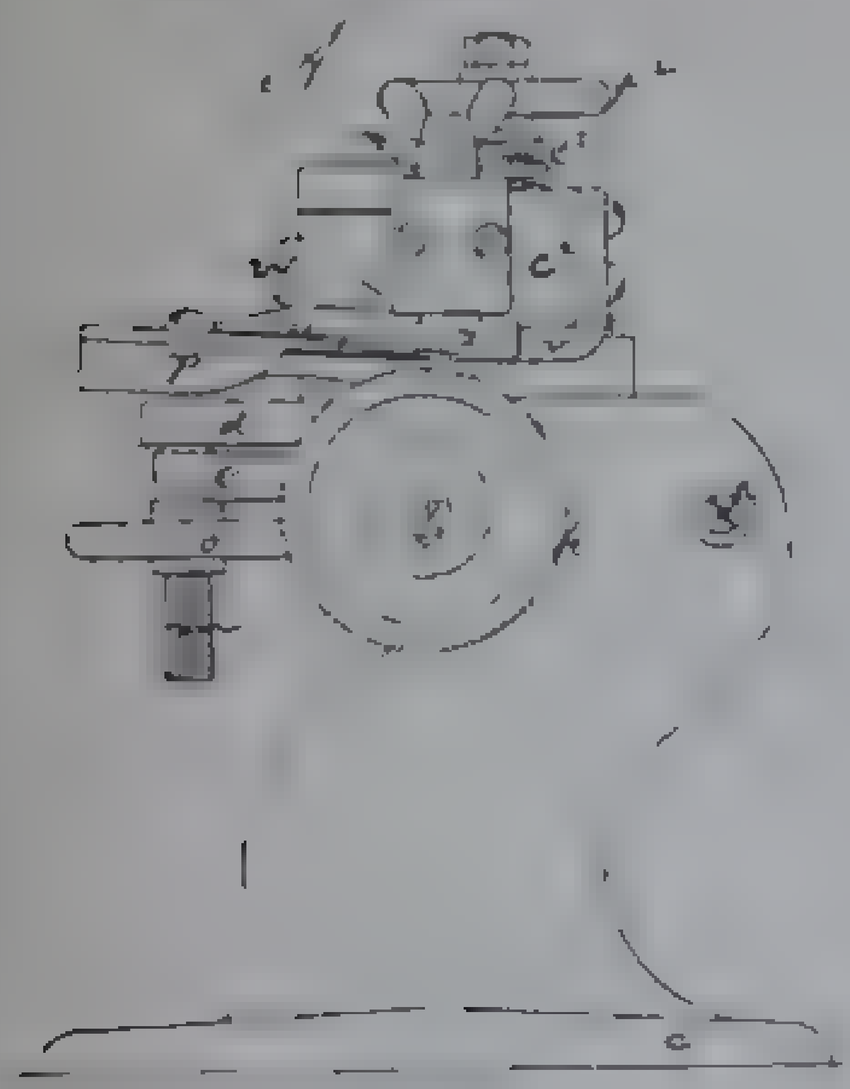
Witnesses:
ED. M. JOHNSTON,
WILL. B. MCCARTHY.

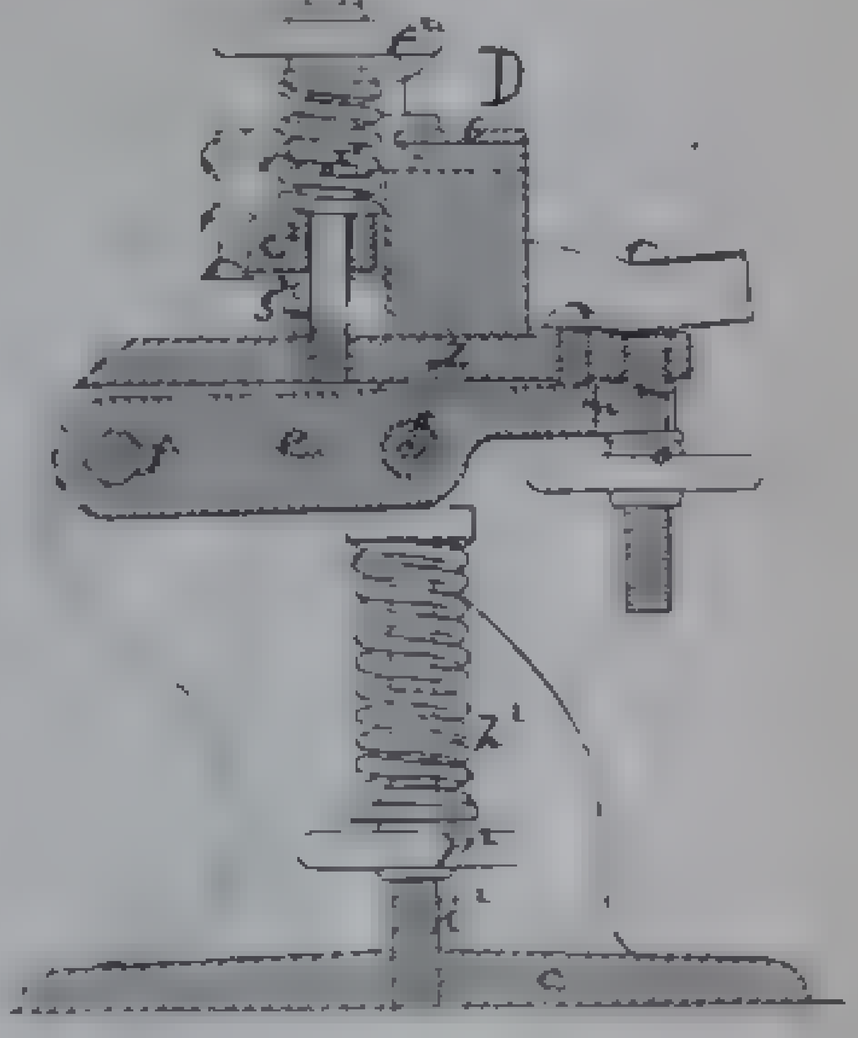
2 Sheets--Sheet 1.

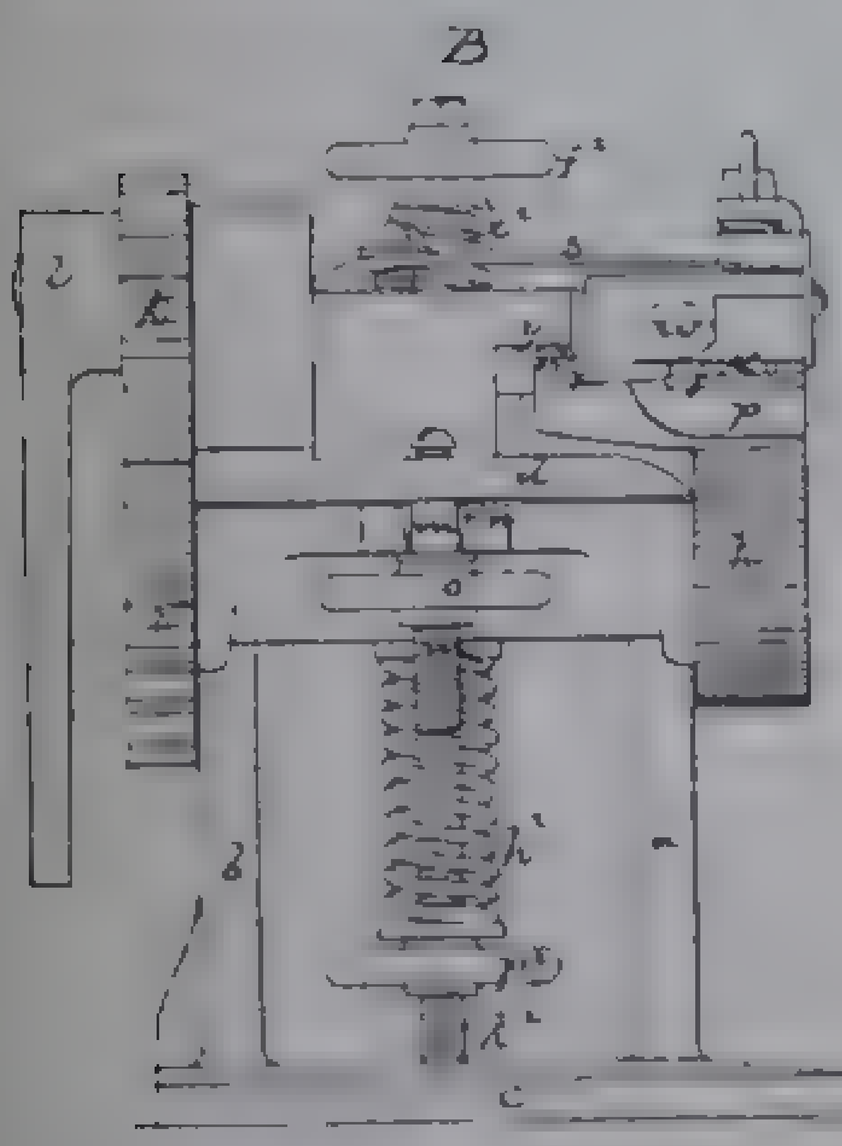
H. S. VROOMAN.

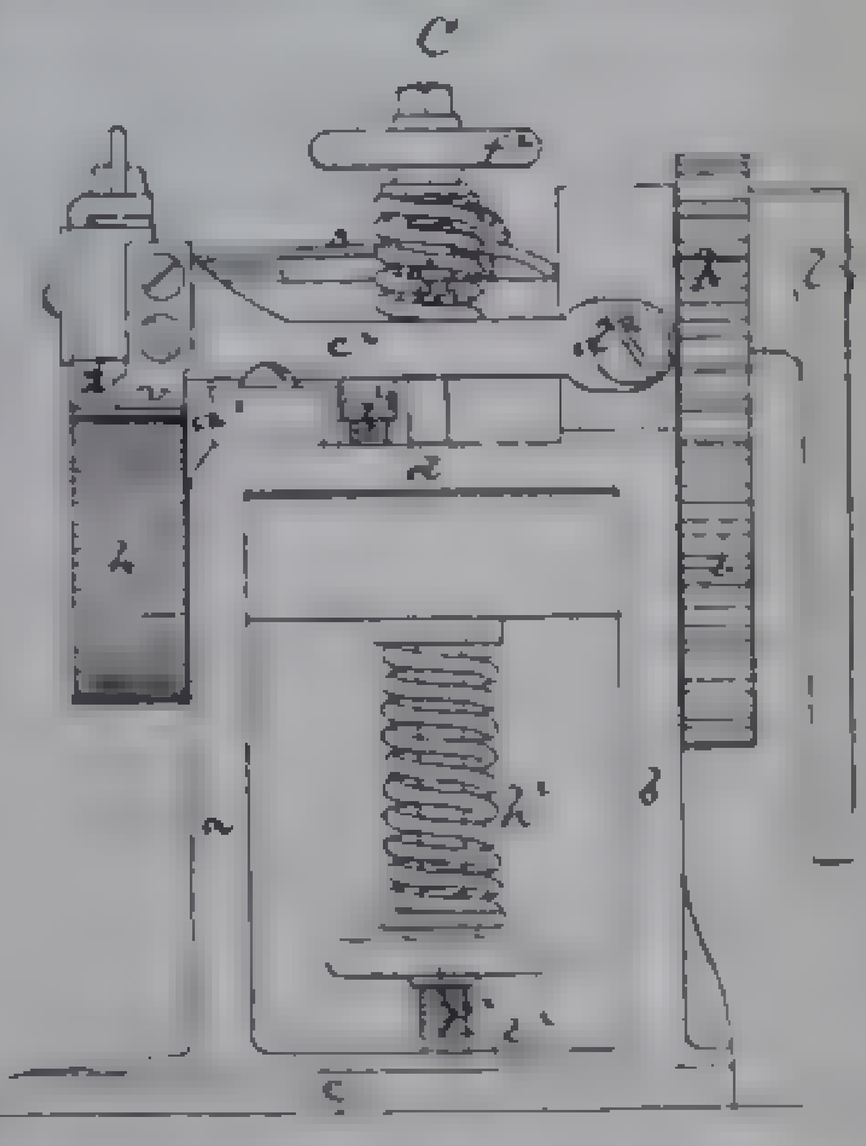
Machine for Skiving Boot and Shoe Counters.

No. 124,098. Patented Feb. 27, 1872.









Witnesses { W. T. Bingham
S. N. Pattison.

H. S. Vrooman
by his attys
Crosby & Gregory

124,098

UNITED STATES PATENT OFFICE.

HENRY S. VROOMAN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SKIVING BOOT AND SHOE COUNTERS.

Specification forming part of Letters Patent No. 124,098, dated February 27, 1872.

To all whom it may concern:

Be it known that I, HENRY S. VROOMAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Machines for Skiving Boot and Shoe Counters, &c.; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to the organization of machines for skiving counters, &c.; and consists principally in so hanging or pivoting a skiving knife to the frame of the machine near the edge guide, that the point or outermost end of the cutting edge of the knife shall automatically rise or fall proportionately to the thickness of the material being cut, while the inner portion of the knife remains vertically the same; in a provision for readily varying the width of the scarf, and in certain details of construction and organization of the mechanism.

The drawing represents a machine embodying my improvement. A shows the machine in front elevation. B and C are opposite side elevations of it. D is a vertical section. E is a plan of it.

a b denote two uprights, extending from a bed plate, *c*, and having at top a cross plate, *d*, integral with them. Underneath this plate an arm, *e*, is pivoted, as seen at *f*, this arm extending under the plate, and having journaled in its front part a shaft, *g*, carrying at one end a toothed feed wheel, *h*, and at its opposite end a gear, *i*, driven by a pinion, *k*, on a crank handle shaft, *l*. From the under side of the plate *d* (at the free or movable end of the arm *e*) a screw-pin, *m*, extends down through a slot, *n*, in the arm, and under this slot is a nut threaded wheel, *o*, working on the screw pin. By turning the wheel upon the screw the arm *e* is forced up toward the plate *d*, and with it the shaft *g* and feed wheel *h* to any desired distance from the cutting edge of a skiving knife or cutter. This cutter is immovably fastened to a stock or block, *p*, the cutter having a slot, *q*, through which the attaching screw *r* passes; but this slot being only to permit the cutting-edge to be set further forward as it is ground away in shaping, or to compensate for wear, so as to maintain it in the same relative position to the top point of the feed-wheel. The inner edge of the cutter shank may set in a groove, *u*, to keep the inner end of the cutting edge in position, and the edge of the material to be skived is fed over the top of the wheel *h*, and between the wheel and a presser-foot, *v*, the wheel presenting the leather to the action of the knife. The stock *p* is hung upon a screw-pin or pivot, *w*, at such distance above and in such relation to the vertical line of the inner extremity of the cutting-edge of the knife, that when the outer end of the knife is raised or lowered by the stock swirveling upon the pin *w*, the distance between the inner portion of the cutting-edge of the knife and the feed-wheel *h* remains the same. An adjustable foot or gauge, *z*, (adjustable vertically by suitable mechanism) is attached to the front portion of the stock *p*. This gauge *z* rests upon the material being skived and determines the elevation or depression of the outer end of the knife. This gauge *z* is made to bear downward by the stress of a stout spring, *s*, upon the upper surface of the material, and as the knife and gauge are both attached to the stock or block *p*, the vertical adjustment of the gauge will raise or lower the outer portion of the cutting edge of the knife and determine the width of the scarf. The lowest extremity of movement of the outer portion of the cutting-edge of the knife is determined by a set-screw, *x*, the top of the screw striking the shoulder *y*. Behind the gauge *z* and in front of the edge guide or ledge a^2 is a presser foot, *v*, the vertical shank of which is fastened to the front of an arm, e^2, pivoted at its rear end to the main frame by a pin, d^2. This arm is held down so as to cause the presser foot *v* to act upon the material by the stress of a spring, e^3, which is made to operate downward upon the arm by means of a hand-wheel, f^2, bearing on its upper end, the wheel f^2 having a thread in it and working upon a screw-bolt that passes down through the spring and is fastened at the lower end to the frame of the machine.

It will thus be seen that a counter, when put in between the feed-wheel and presser-foot, is fed up to the action of the knife and a uniform thickness of skived edge is produced, and a uniform width of scarf is obtained upon all thicknesses of stock or material; and also the thickness of the skived edge of the counter

2 Sheets—Sheet 1.

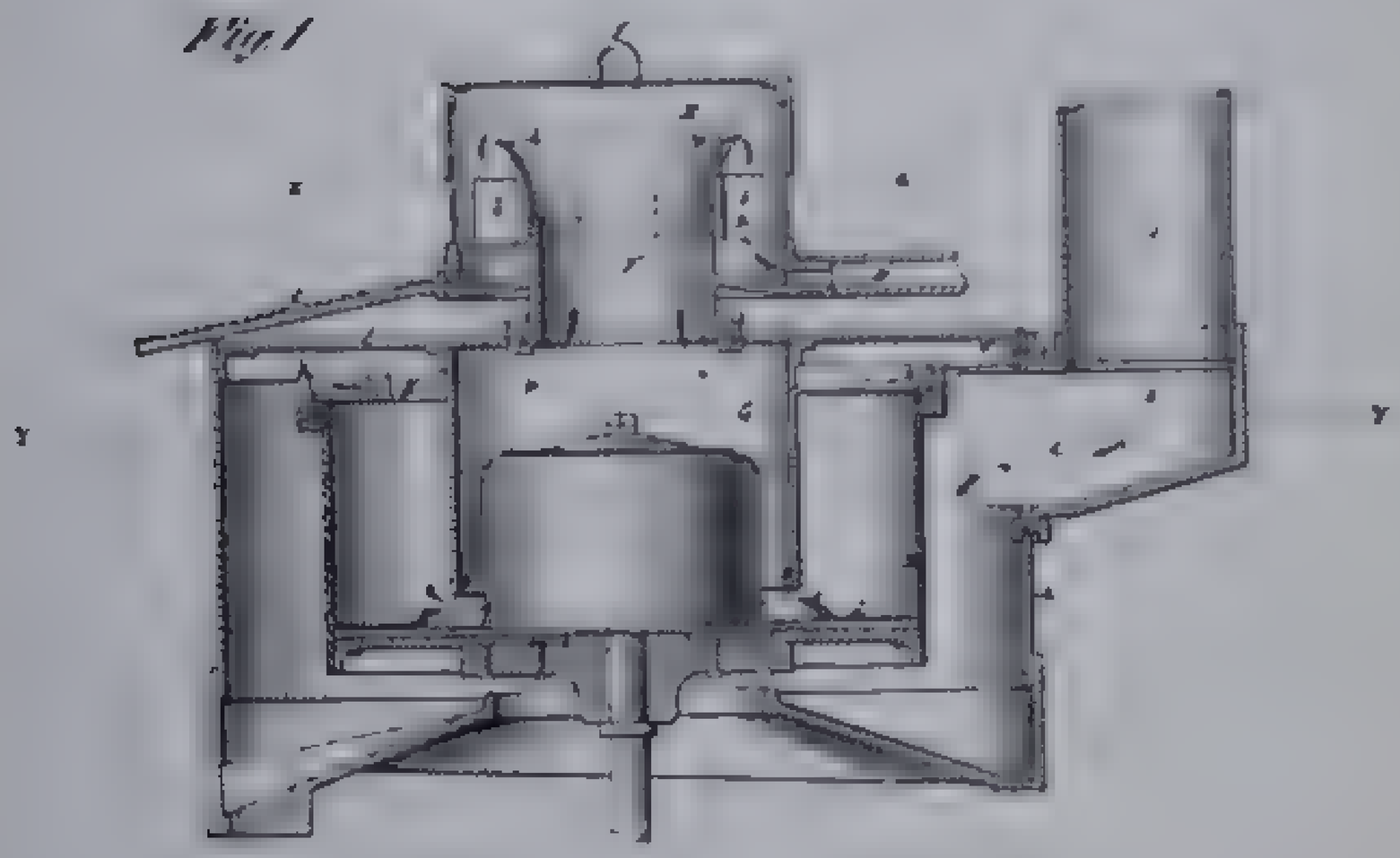
L. WEINRICH.

Improvement in Centrifugal Sugar Machines.

No. 125,358. Patented April 2, 1872.

Fig 2

Fig 1



Witnesses.
Jos. Haynes
F. Schulmann

Ludwig Weinrich
per Brown Cornell & Co
Attorneys

UNITED STATES PATENT OFFICE.

LUDWIG WEINRICH, OF BERLIN, PRUSSIA.

IMPROVEMENT IN CENTRIFUGAL SUGAR-MACHINES.

Specification forming part of Letters Patent No. 123,338, dated April 2, 1872.

To all whom it may concern:

Be it known that I, LUDWIG WEINRICH, of Berlin, Prussia, have invented a new and useful Improvement in Centrifugal Sugar-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a sectional elevation at the line *x x*, in Fig. 2, of a centrifugal sugar-machine constructed in accordance with my invention; Fig. 2, a horizontal section of the same at the line *y y* in Fig. 1; Fig. 3, a plan of upper ring connected with the cage; and Fig. 4, a horizontal section of the machine at the line *z z* in Fig. 1.

Similar letters of reference indicate corresponding parts throughout the several figures of the drawing.

This invention relates to centrifugal machines in which the sugar mass is exposed to the action of steam and air for the purpose of purging and purifying the same; and the invention consists in a peculiar and advantageous construction of the machine, including a removable construction of the cover of the machine, with upper and lower attachments, to facilitate access to the interior of the cage, devices or arrangements for preventing water of condensation from reaching the sugar, and a removable ring provided with fastenings disposed on top of the cage to facilitate the working of sugar mass in lumps.

In the accompanying drawing, A represents the outer case, and B the revolving cage of a centrifugal sugar-machine. The case A is constructed with a ring at its top, on which is placed a cover, C, that closes the centrifugal machine. D is a gutta-percha or flexible tube, for conveying steam into a cap, E, where said steam is mixed with air entering by apertures *b*, and the combined steam and air drawn by the revolving motion of the cage down a throat, F, and within and down through an inner fixed case or cylinder, G, finally emerging at the bottom of said inner case for action on and among the sugar mass. Any water of condensation forming at the bottom of the cap E is carried off by a pipe or spout, *c*, and any further water of condensation forming within the cylinder G settles on the bottom of the cage B and passes off underneath said bottom without coming in contact with the sugar mass, for which purpose the bottom of the cage is made double, with an intervening space between the upper and lower portions thereof, and the upper portion *d* of such bottom provided with an opening at its center, and preferably stopping short of the cage at its periphery. This double bottom is made of copper to prevent tainting of the sugar, as is apt to be the case when iron is used, by reason of the oxidizing of the metal. The combined steam and air passing round the bottom edge of the cylinder G thus reaches the sugar mass in a dry state or deprived of water, and, permeating the sugar, effectually purifies or purges it. As it is desirable to pass a large quantity of the steam and air in a short period of time through the sugar mass, the upper part of the outer case A is provided with an enlarged opening and escape-branch, *e*, in communication with a pipe, *f*, for carrying off the damp air passing out of the sugar mass. The cylinder G, the cover C, and attachments or devices mounted thereon, are made capable of being lifted at pleasure by means of rope and tackle attached to a hook or loop, *g*, fast on the cap E, whereby ready access may be had to the interior of the machine. The cage B is strengthened at its top edge by a band, *h*, which also serves to receive bolts *i* of a ring, H, that rests upon the upper edge of the cage, but is not fast to it except when locked to the band *h* by the bolts *i*. Said ring is also fitted with keys *k*, that drop into notches in the band *h* to facilitate the fitting of the ring H to its place, so that the bolts *i* will be in line with the holes in the band they are destined to fit. By means of this detachable ring H every facility is afforded for getting at the interior of the cage and for the introduction of the sugar mass therein in hard symmetrical lumps or pieces, as is practiced under a certain process of manufacturing sugar.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination, with the cover C, of the inner case or cylinder G, the throat F, and the cap E, all united and made capable of being lifted in concert out of or away from the main case A and cage B, substantially as specified.

2. The cap E, provided with a steam-inlet,

JOHN B. WELPTON.

Tug Clip.

No. 125,237. Patented April 2, 1872.

Fig. 2.

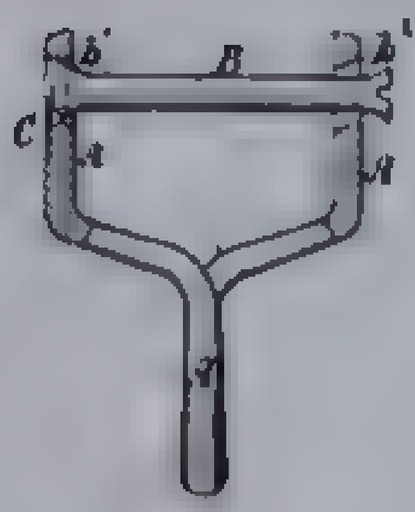


Fig. 1.

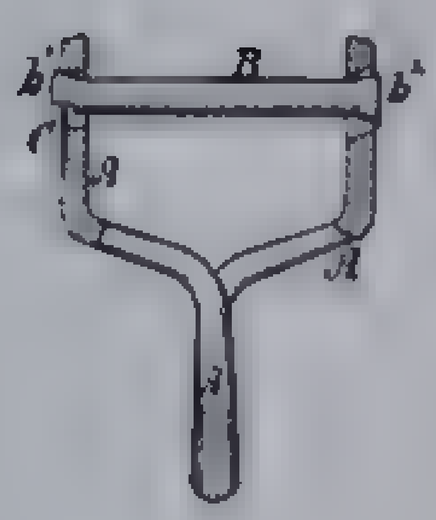


Fig. 3.

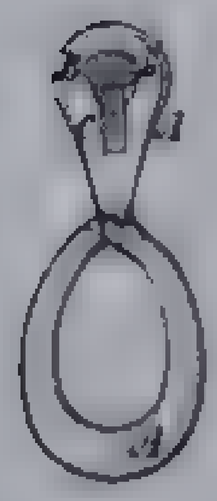


Fig. 4.

Witnesses:

A Bonnemann
Geo. H. Mabee

Inventor:

J. B. Welpton

Per Munn & Co

Attorneys.

123,237

UNITED STATES PATENT OFFICE.

JOHN B. WELPTON, OF TABOR, IOWA.

IMPROVEMENT IN TUG-CLIPS.

Specification forming part of Letters Patent No. 123,237, dated April 2, 1872

Specification describing a new and Improved Adjustable Hame Tug Clip, invented by JOHN B. WELPTON, of Tabor, in the county of Fremont and State of Iowa.

Figure 1 is a detail sectional view of my improved hame tug clip, showing the bolt locked in place. Fig. 2 is the same view as Fig. 1, but showing the bolt partly removed. Fig. 3 is an edge view of the same. Fig. 4 is a detail cross section of the same, showing the bolt in place.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved hame tug-clip, simple in construction, convenient and reliable in use, and which shall be so constructed as to allow it to be conveniently detached when desired for changing the hames or other purposes. And it consists in the hame tug clip constructed as hereinafter more fully described.

A is the body or loop of the clip, which is bent or twisted, as shown in Figs. 1, 2, 3, and 4, to bring the loop that receives the hame-staple at right angles with the bolt B. B is the bolt, which passes through the eyes of the loop or body A. The bolt B is made with a head upon each end. The head b^1 upon the forward end is made oblong, and flaring upon two sides, and has a rabbet or shoulder formed upon the third side, as shown in Figs. 1 and 2, to receive the end of a small spring, C, attached to the arm of the body or loop A, as shown in Figs. 1 and 2 and 3. Both the holes or eyes of the body or loop A are made oblong, so that the oblong head b^1 of the bolt B may pass through them, and the forward hole is made flaring on its sides to correspond with the head b^1, as shown in Fig. 4, so that the bolt cannot come out when in use. In the other head, b^2, of the bolt B, is formed a slot or groove to receive a screw-driver for turning the bolt in inserting it and removing it. To remove the bolt, the point of some sharp pointed instrument is inserted beneath the free end of the spring C, and said end is raised slightly, and, at the same time, the bolt B is turned one quarter around, the head of the bolt passing beneath the end of the spring, and thus passing out freely. In inserting the bolt, the forward head of the bolt is passed through the holes or eyes of the loop or body A until it rests against the spring C, when a slight pressure and a one quarter turn with a screw driver brings it to its place.

The spring C does not require to be very strong as there is no strain upon it, its only office, when the clip is in use, being to keep the bolt B from turning.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

An improved hame tug clip, formed by the combination of the twisted body or loop A, bolt B b^1 b^2, and spring C, said parts being constructed and operating in connection with each other, substantially as herein shown and described, and for the purposes set forth.

JOHN B. WELPTON.

Witnesses:
G. B. EARTMAN,
J. C. CORNELL.

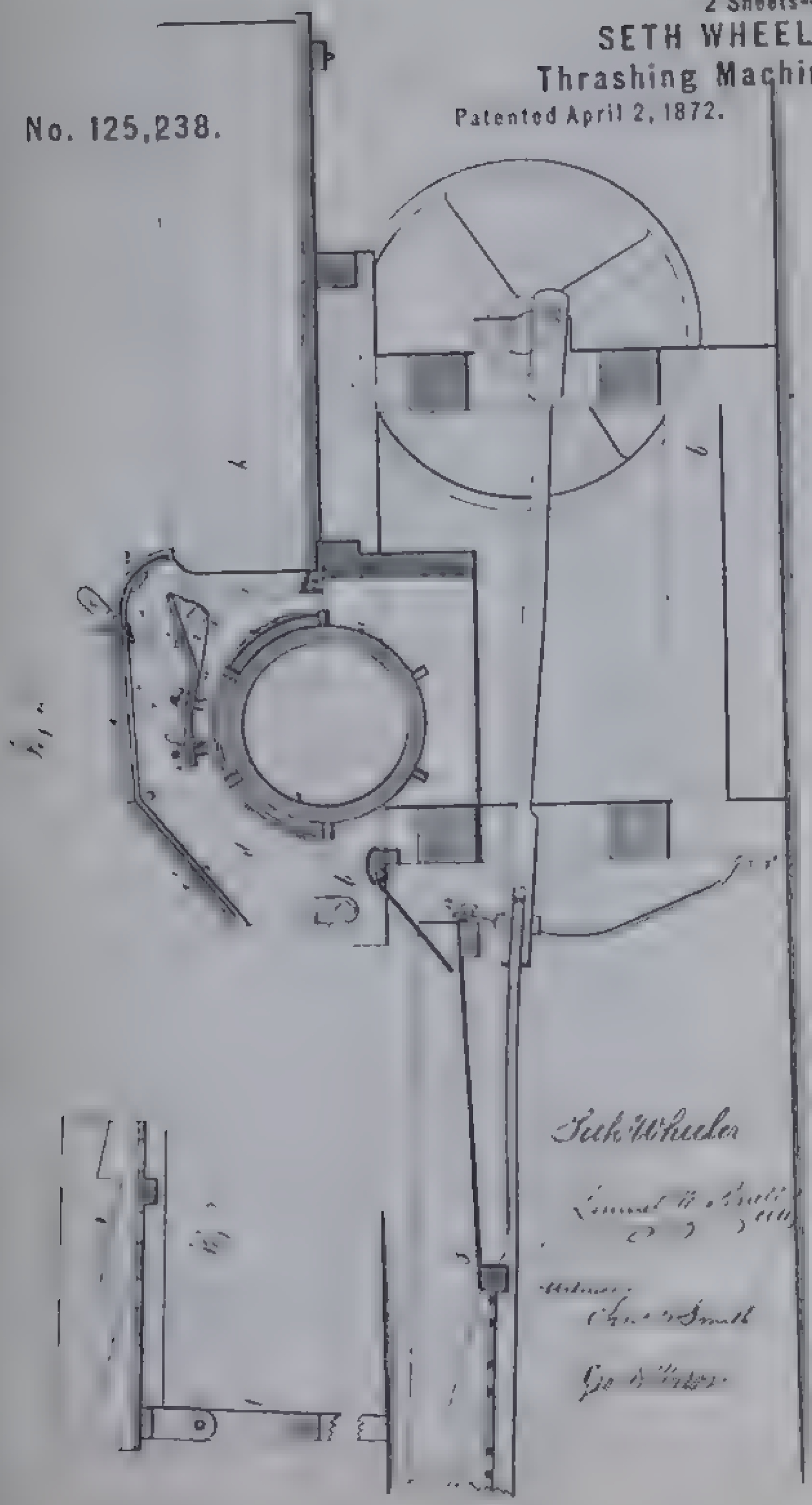
No. 125,238.

2 Sheets--Sheet 2.

SETH WHEELER.

Thrashing Machines.

Patented April 2, 1872.



Witnesses:

Inventor:

123,239

UNITED STATES PATENT OFFICE.

SETH WHEELER, OF ALBANY, NEW YORK.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. 125,239, dated April 2, 1872.

To all whom it may concern:

Be it known that I, SETH WHEELER, of Albany, in the State of New York, have invented an Improvement in Thrashing-Machines; and the following is declared to be a correct description of the same.

This invention is made for rendering the parts of the thrashing machine more durable, easily adjusted, and cheaper to construct and keep in order.

In the drawing, Figure 1 is a plan of the said thrasher, the outer end of the shaking separator being removed. Fig. 2 is a vertical section of the thrashing-machine and a portion of the separator.

The thrashing-cylinder *a* is constructed in the usual manner, and is revolved in bearings upon the frame *b*. The sides *d d* of the hood are made of metal with ribs 2 2 cast upon the inner faces for receiving the ends of the wooden case *c*. This case *c*, instead of being nearly level, as usual, and requiring a sheet-iron apron to stop the flying grain, is made diagonally at *c'*, so as to throw the grain down upon the shaking-separator *f*. In order to prevent straw winding around the ends of the threshing cylinder *a* the sides *d d* are cast with projecting flanges 3 3, that are above the ends of the cylinder and curved to conform to the same. These sides *d* are also provided with pockets *i i*, into which the ends of the sides boards *k* and *l* pass; these pockets being cast with the sides are very strong, and there are not any bolts or straps to work loose by the motion of the machine, and the cost of construction is lessened. At the mouth of the "dust-flue"—that is, above the cylinder *a*, between that and the top-boards *e* of the flue—I introduce the curved plate *m*, that is slipped upwardly between the side plates *d*, and into grooves therein, so that the ends of said plate are sustained, and the plate can be raised or lowered, or removed when necessary, for cleaning out the dust-flue. The pins 5, inserted through *e* and *m*, serve to hold the latter in position. Between the side plates *d* is the adjustable concave *n*, to which the thrasher-teeth *o* are firmly attached by nuts 6, and this concave is extended toward the feeding-side of the machine as an inclined plate *n'*, forming a hopper-mouth, and at the ends of this plate are the flanges 7 for receiving the bolts 8, that form hinges, upon which the concave swings as it is adjusted in raising or lowering the said concave. The parts *n n'* and 7 are all cast together. In order to raise or lower this concave *n* I make use of the lever *r* on the fulcrum 9, and having a slot and set-screw at 10, to clamp the parts when adjusted. The end of this lever passes through a slot in *d*, and beneath the concave *n*, so as to support the same; by this means the concave *n* can be raised or lowered with facility, even while the machine is in operation, and a greater extent of movement can be given than heretofore. In thrashing-machines it has been usual to suspend the inner end of the shaker from the frame by chains or cords, and to support the outer end upon a swinging-frame or buck, *f*, as shown in Fig. 3. I make use of this frame or buck, and dispense with the chains or cords, because the same are not reliable; they are apt to break or become unhooked; and the shaker may receive a lateral as well as a longitudinal movement. I make use of swinging bars *s s*, applied between the frame and the shaker *f*, one end of each being connected to the frame and the other end to the shaker at 12. These bars are preferably made as springs, so as to yield easily to the movement of the shaker longitudinally, but prevent lateral motion; hence the machine works more reliably, the straw and chaff working regularly along the shaker, instead of gathering in ridges from lateral motion.

I claim as my invention—

1. The metal side plates *d*, cast with the ribs 2 2 and flanges 3 3, in combination with the thrashing-cylinder *a* and hood-boards *c*, as and for the purposes set forth.

2. The curved plate *m*, in combination with the aforesaid metal side plates *d*, and adjustable in grooves cast in the faces of such plates *d*, as set forth.

3. The concave *n*, inclined plate *n'*, and flanges 7, cast together and receiving the thrasher-teeth *o*, in combination with the metal side plates *d*, between which the said concave and incline are sustained, as set forth.

4. The lever *r*, constructed as set forth, and applied to the concave *n*, substantially as specified, for adjusting such concave *n*, as set forth.

Signed by me this 20th day of December, A. D. 1871.

SETH WHEELER.

Witnesses:
GEO. B. MARTIN,
EDGAR JEROME.

H. A. WHITING.

Improvement in Process and Apparatus for the Manufacture of Sulphate of Lead.

No. 125,153. Patented April 2, 1872.

Fig 1.

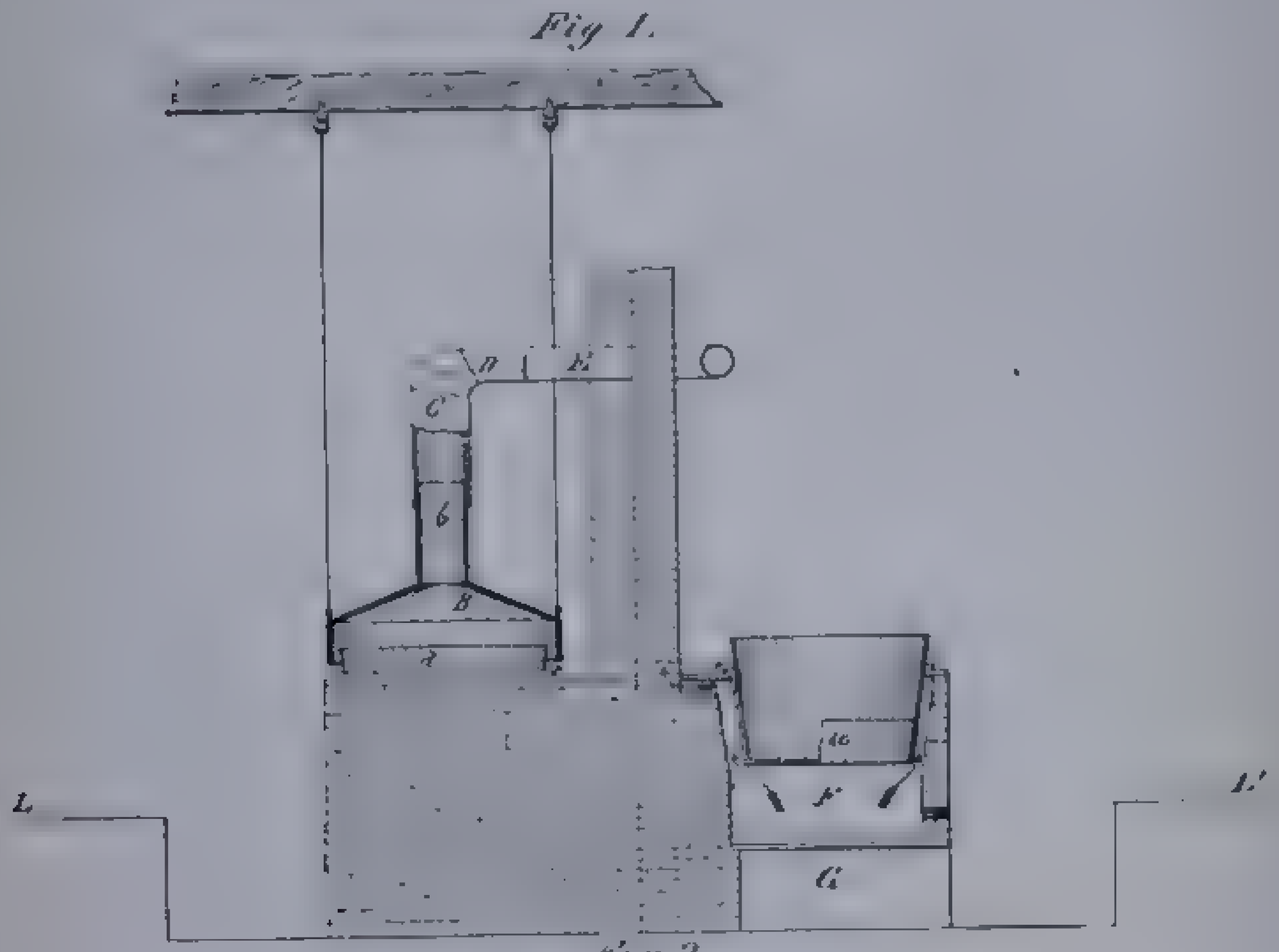
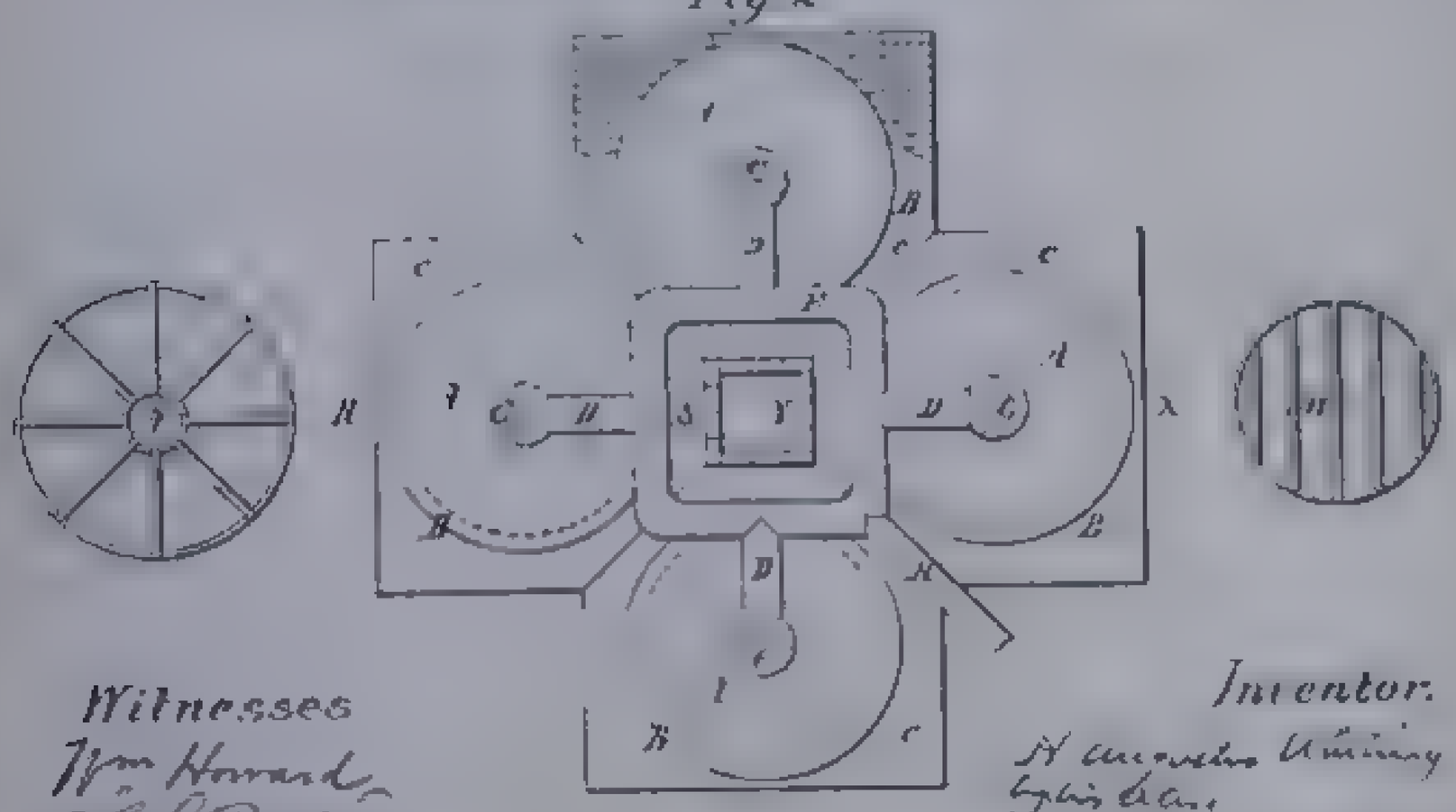


Fig 2



Witnesses
Wm Howard
H. L. Bruce

Inventor:
H. A. Whiting
by his Atty
McKillop & Bowditch

125,153

UNITED STATES PATENT OFFICE.

H. AUGUSTUS WHITING, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN PROCESSES AND APPARATUS FOR THE MANUFACTURE OF SULPHATE OF LEAD.

Specification forming part of Letters Patent No. 125,153, dated April 2, 1872

I, H. AUGUSTUS WHITING, of San Francisco, county of San Francisco, State of California, have invented a certain Process for the Manufacture of Sulphate of Lead, of which the following is a specification:

Nature and Objects of my Invention.

The nature of the first part of my invention consists in inducing a complete and rapid reaction between metallic lead (Pb) and concentrated sulphuric acid (SO_3,HO) through the intermediary agency of metallic zinc. The lead may be in the form either of bars, or sheets, or strips, and coils, &c., as may be found most convenient. The zinc is to be alloyed with the lead in the proportion of one per cent. by weight.

The second part of my invention consists in the use and arrangement of the apparatus hereinafter to be described, and whose object is, threefold, to wit: First, to heat the sulphuric acid together with the zinc-lead; and with, second, the least expenditure of time and labor; third, to conduct the fumes (consisting of sulphurous acid and some sulphuric acid) into sulphuric acid chambers, where they can be reconverted into sulphuric acid, which can be used again in subsequent operations.

The object of my invention is to substitute the use and manufacture of the innocuous sulphate of lead as a paint for that of the exceedingly poisonous carbonate of lead, commonly known as "white lead."

Details of the Manufacture.

To one part, by weight, of the zinc-lead (alloyed in the proportion hereinbefore described) add two parts, by weight, of concentrated sulphuric acid, (66° Baumé,) and place the two into the porcelain "pot," hereinafter to be described. Then light a fire upon the grate of the furnace, and, having lowered the "hood" to within about three (3) inches of the iron plate on the top of the furnace, heat the contents of the "pot" gradually to the boiling point of sulphuric acid, (326° centigrade or 620° Fahrenheit.) In from twenty (20) to thirty (30) minutes the reaction will take place rapidly and with quite violent ebullition. In a few minutes after the reaction will be completed, and all the lead in the pot will have combined with the sulphuric acid to form sulphate of lead, which latter will remain as a more or less dingy white residue within the pot. The fire must now be withdrawn, and the pot and its contents allowed to cool during about half an hour to one hour. Add, now, clear water, with great caution at first, and in very small quantities, until all violent "spitting" or bubbling ceases; afterward in larger quantities, until the pot is filled to within about eight (8) inches of the top. The workman then stirs the contents of the pot for, say, ten (10) minutes with wooden ladles covered with sheet lead, and at the end of that time the sulphate of lead is allowed to settle. As soon as the supernatant liquor becomes clear it is to be drawn off, as far as practicable, through glass siphons, and the sulphate of lead is to be then transferred to wooden vats which are lined with lead, and then washed several times with clear water—stirring well each time with the ladles—until the "washings" no longer taste acid to the tongue. When well "washed" the sulphate of lead is to be taken out of the "vats" and placed in a number of clean clay molds, (similar to the French "scorifiers" used in assaying,) and transferred to a "drying room," in which a constant temperature of about 185° Fahrenheit is maintained. When well dried from all perceptible moisture, the molds with their contents are to be placed in a "muffle furnace," and calcined at a red heat for about half an hour. At the close of this operation the "cakes" of sulphate of lead will be ready for the subsequent operations of "grinding," mixing with oil, &c., which operations are to be conducted in the same manner as in the corresponding stages in the preparation of carbonate of lead ("white lead") for the market.

Description of Drawing.

The furnaces are arranged in a group of four, (4,) as shown in the "plan," for convenience and economy of time and labor.

Elevation.

One half the "elevation" is a section through the line *x y* in the "plan," and shows the position and manner of setting the pots, so that the heat and flame may play around the cast iron "tub." The tubs are seen supported by a cast-iron flange, which rests upon the iron plate on top of the furnace.

D. D. WILLIAMSON.

Improvement in Wheels for Traction Engines.

No. 124,186. Patented Feb. 27, 1872.

Fig 1

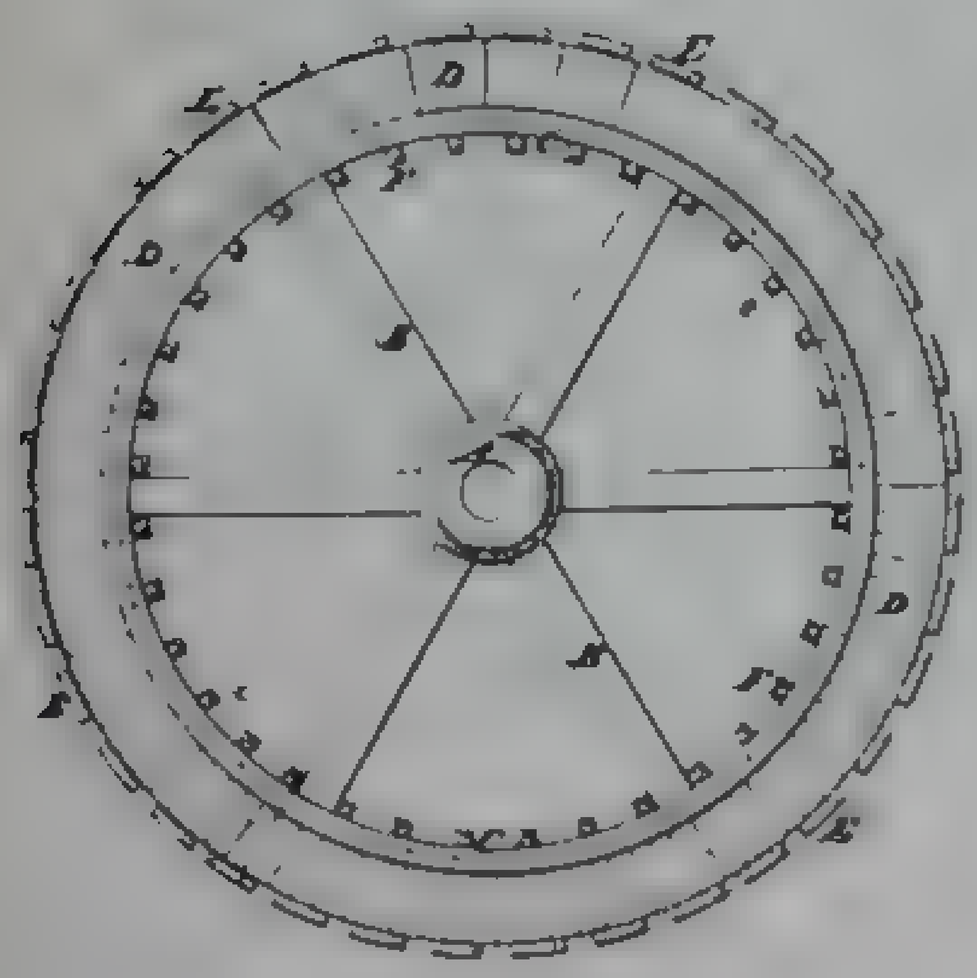
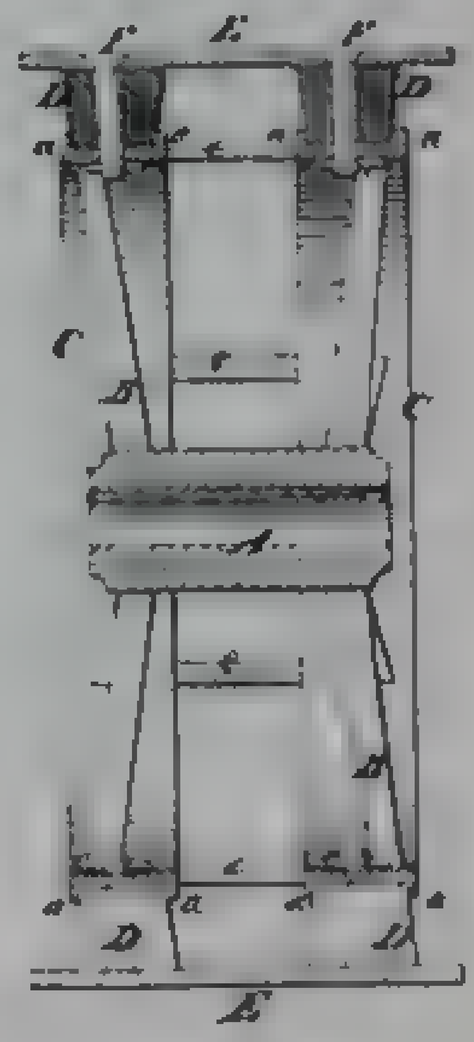


Fig 2



Witnesses:
Chas. F. Wells
R. H. Eddy

D. D. Williamson

124,186

UNITED STATES PATENT OFFICE.

DOUW D. WILLIAMSON, OF NEW YORK, N. Y.

IMPROVEMENT IN WHEELS FOR TRACTION-ENGINES.

Specification forming part of Letters Patent No. 124,186, dated February 27, 1872.

Specification describing a Wheel for Traction Engines, invented by DOUW D. WILLIAMSON, of the city, county, and State of New York.

The object of this invention is to provide wheels for traction-engines or self-moving carriages, which, in addition to possessing all the advantages of a continuous rubber tire protected by metal armor, shall be cheaper, lighter, more durable, and shall have greater adhesion. To this end it consists in the novel construction of a wheel having a metal felly or felloe and a series of rubber springs protected by metal tread-plates or shoes so secured as to admit of the compression of said springs.

In the accompanying drawing, Figure 1 is a side view of a wheel made according to my invention. Fig. 2 is a diametrical section of the same.

Similar letters of reference indicate corresponding parts in all the figures.

A is the hub, which is of cast-iron, and B B are the spokes, which are made of wrought-iron. C C are two bearing-rings or felloes, which are also of iron, and have flanges a a on their edges, which project about half an inch from their outer peripheries. These felloes are each about four inches wide between the flanges, and they are provided with occasional intermediate braces c for the purpose of keeping them at the proper distance apart. These, however, may in some cases be omitted. D D are the vulcanized-rubber springs. They are about four and a half inches thick, four inches wide, and four inches long. They have central holes of about one inch in diameter passing longitudinally through them. They are arranged side by side and next to the felloes, between the flanges, so as to form two continuous sectional rings. E E are the tread plates or shoes, which may be of metal or wood, and are of rectangular form, about twenty inches long and three inches wide, and extend across the two series of rings of springs. F F are the bolts by which the springs and shoes are secured to the felloes. They are about one inch in diameter, and have taper heads, which are countersunk into the shoes E E, and their shanks pass through the shoes and through the springs D D and felloes C C. Their ends project beyond the latter, and are secured by pins or cotters c c passing transversely through them.

When in operation, the weight of the steamer compresses those springs which are on the under side of the wheel, and the bolts recede, thereby bringing a large number of the shoes in contact with the ground, and obtaining sufficient adhesion or hold for the drivers, and also a bearing for the steamer on soft ground. The action of these springs also serves to preserve the machinery. As the wheel revolves, the elasticity of the springs causes them to resume their shape as soon as they are out of contact with the ground. The flanges on the wheels prevent any lateral movement of the springs. By having two bearing-rings and corresponding series of springs, with an intermediate open space between the rubber rims and their connecting-shoes, mud and earth which may pass between the shoes free themselves and drop out, and consequently all danger of clogging the springs so as to prevent their action is obviated; and this open space also materially lessens the amount of rubber required, and renders the wheel lighter and much more elastic, in addition to lessening its cost. In case of accident to one of the springs, it can be renewed at a very slight expense.

When the steamer having these wheels applied is to be used on soft ground, the shoes or tread plates may be longer than described, for the purpose of increasing the bearing surface and preventing the wheels from indenting themselves into the ground. They can also be fitted with spurs or paddles for running on ice or very slippery earth.

These wheels are very durable, as they have no armor or other parts liable to be broken, and as there can be no possible slip between the springs and felloes they are reliable under a heavy strain.

Claims.

1. A wheel for traction-engines or self-moving carriages, having its springs arranged on double felloes, with space between them, for-

S. K. WILSEY.

Improvement in Machines for Sharpening Saws.

No. 122,929. Patented Jan. 23, 1872.

Fig. 1.

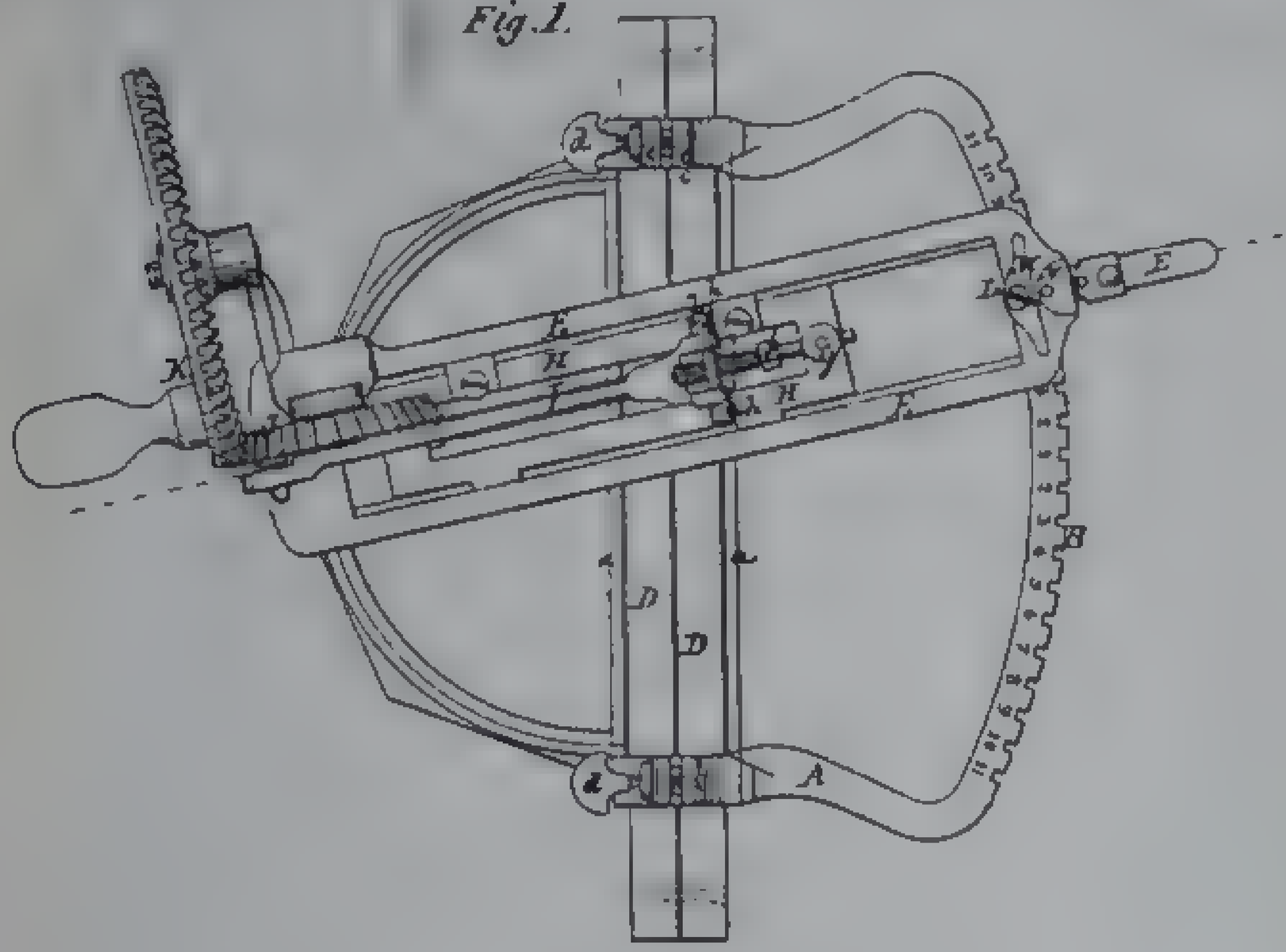
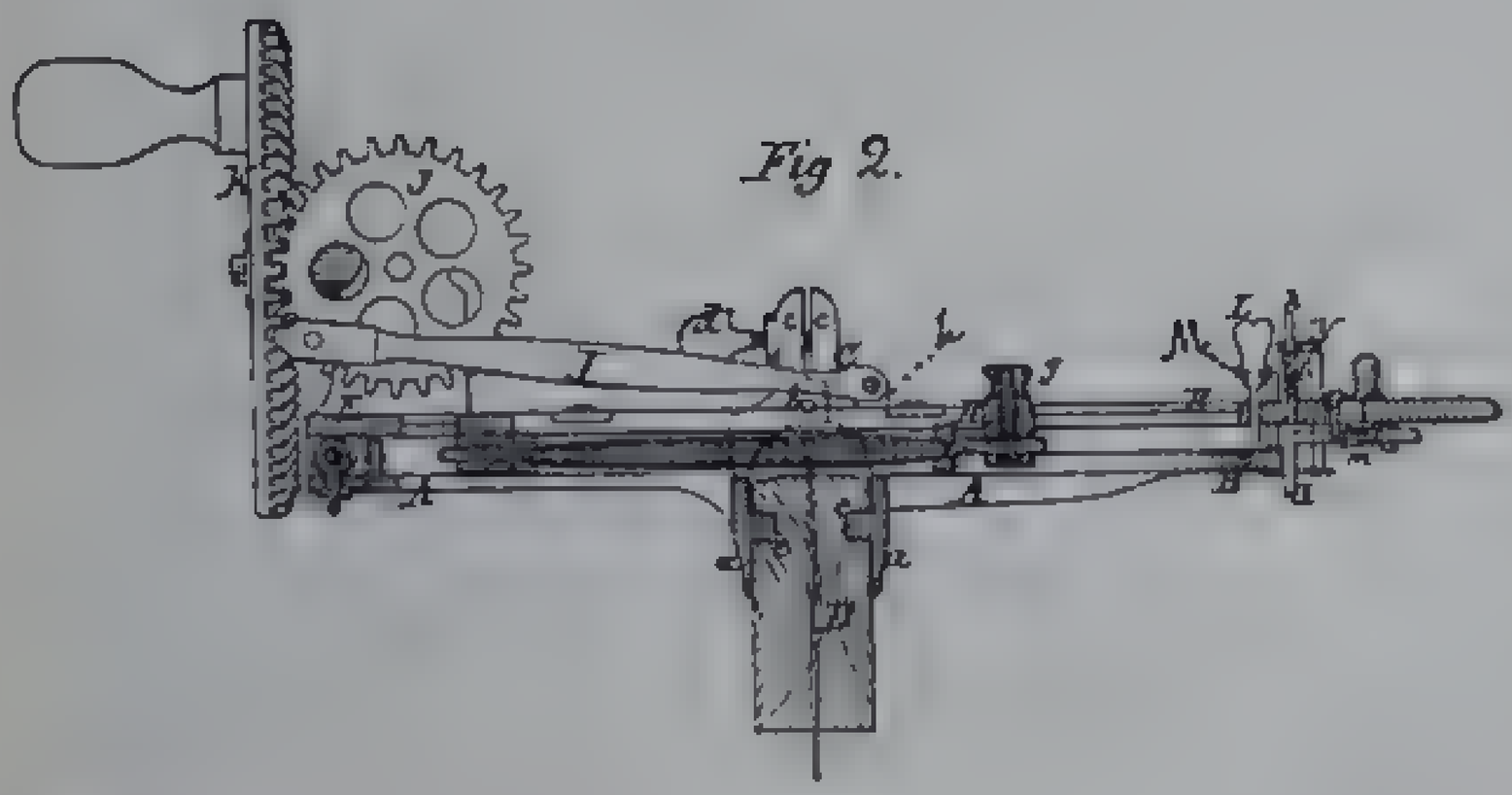


Fig 2.



Witnesses

C. C. Wilsey Jr.

W. H. Henderson

Inventor

Simon K. Wilsey

by W. H. Henderson,

Attys.

122,929

UNITED STATES PATENT OFFICE.

SIMON K. WILSEY, OF KIRKWOOD, RIVERSIDE P. O., NEW YORK.

IMPROVEMENT IN MACHINES FOR FILING SAWS.

Specification forming part of Letters Patent No. 122,929, dated January 23, 1872.

SPECIFICATION.

I, SIMON K. WILSEY, of Kirkwood, Riverside P. O., in the county of Broome and State of New York, have invented certain Improvements in Apparatus for Filing Saws, of which the following is a specification:

My invention relates to the combination and arrangement of a reciprocating file-carrier, operated by a crank-wheel and pinion, and a frame having the form of a quadrant transversely hinged, for holding the saw-clamp, in such a manner that the file-carrier shall be capable of carrying the file to the required depth, and also of changing the angle of the file for beveling the cutting edge of the tooth; the object of the invention being to insure accuracy in the size and form of the teeth and to facilitate the operation of filing.

Figure 1 in the accompanying drawing is a plan of an apparatus embodying my invention. Fig. 2 is a side elevation of a longitudinal section through the connecting-rod, file, and saw-clamp, showing the manner of elevating and depressing the file and holding it at the required angle.

A is the frame, which has a notched rim or quarter segment of a circle, B. This frame is made in two parts, connecting with the jaws *a a* of the clamp C, which is hinged in the center *b*, above which project arms *c c* with adjusting thumb-screws *d d*, by which the jaws *a a* may be opened or closed to allow for the variations of the thickness of saw-plates. On the inside of the jaws *a a* are longitudinal tongues, which work in corresponding grooves *e e* in the saw-clamp D, which is opened for the reception of the plate of the saw and closed upon it by screws. For the ordinary hand-saw this clamp should be made about three feet in length, to allow of the required space for the screws at the ends. E is the guide-frame for the file-carrier. One end of this guide-frame is hinged to the head of a pivot in the frame A, which constitutes the radial center of the arc of the guide-segment B. The other end extends to and sweeps the curve, the edge of which is notched at equal distances for the reception of a spring-catch, G, which is attached to the end of said guide-frame for the purpose of holding it in position during the operation of filing the tooth. On the rim of the segment B are numbers corresponding to the notches, commencing at No. 1 and continuing to No. 11, on each side of the line *x x*, intersecting the center of the arc of segment B, so that when the spring-catch G engages with the notch No. 1 the guide-frame shall be at a right angle with the saw-clamp D. H is the file-carrier or gate, which works on guide-ways in the guide-frame E. This gate is provided with adjustable socket-bolts *f f* at each end and on a longitudinal line through the center. These bolts have apertures for the reception of the ends of the file, which is secured in the required position by the adjusting thumb-screw *g*. I is the connecting-rod, which connects with the gate H, near the end, by a pin passing through lugs *h h* and the crank-pin on the beveled pinion J, which receives motion by the driving-wheel and crank K, all being attached to the pivoted end of the guide-frame E. L is a thumb-screw for adjusting the depth of the tooth to be filed. This screw works in the free end of the guide-frame E, and is connected with a stationary collar, M, provided with projections extending through the end of the guide-frame and bearing upon the rim of the segment B, so that by turning the thumb-screw L the guide-frame and file may be elevated or depressed to the required depth for filing. The guide-frame has a projection or handle, to which is attached the spring-catch G and file-feeder N, the lower part of which extends below the rim of the segment B and projects under it; the upper part extends above the guide-frame, and is held in position by a pin, *k*, which is surrounded by a spiral spring, *l*. This spring is placed between the guide-frame E and the upper part of the file-feeder N, which brings the part projecting under the rim of the segment B in contact with it, so that the guide-frame, yielding to the downward pressure of the spring, gives the required "feed" to the file. The spring-catch G is placed in a horizontal position, and engages with the notches on the edge of the segment by means of the spiral spring *l*.

The saw to be filed is first pointed, then placed between the saw-clamp D, the teeth extending slightly above the edge. The clamp is then closed, and secured by screws at the

GEORGE WOODS.

Improvement in Reed Organs.

No. 122,979. Patented Jan. 23, 1872.

Fig: 1

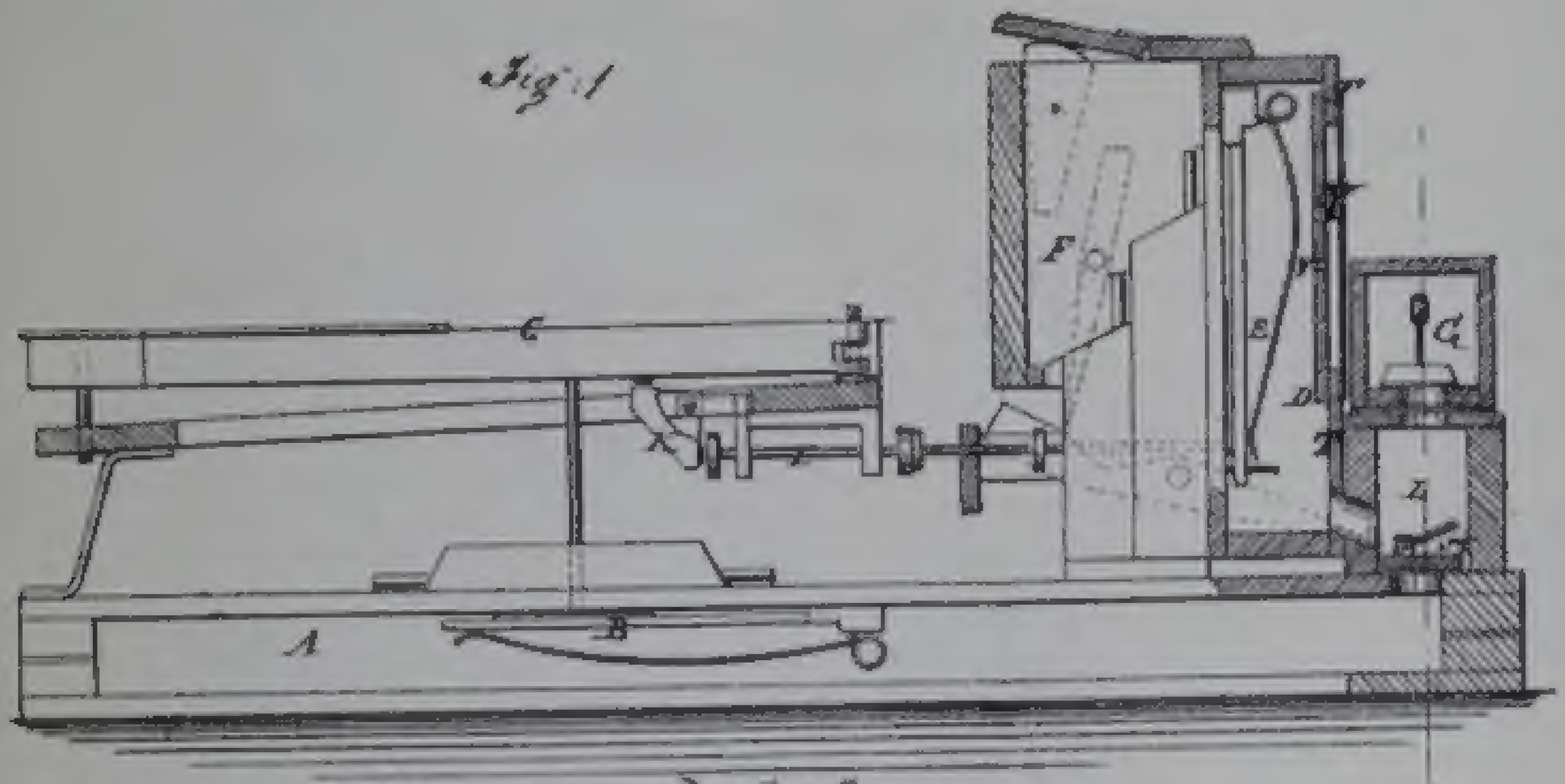


Fig: 2

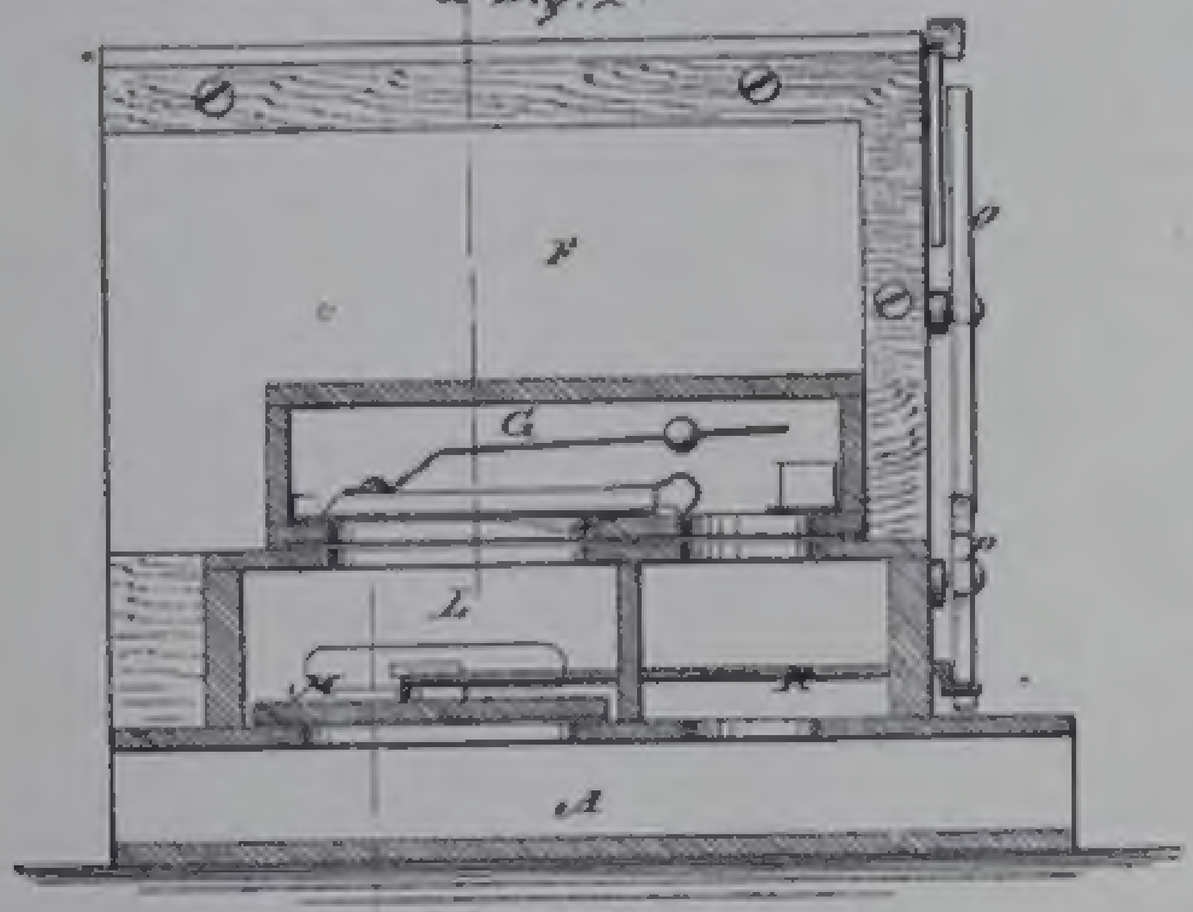


Fig: 3

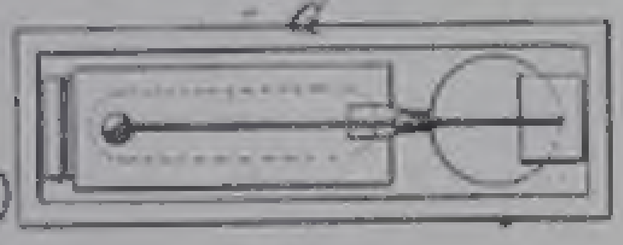
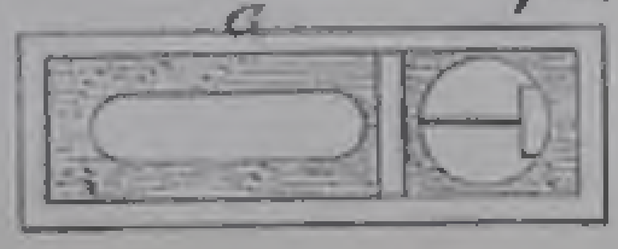


Fig: 4



Witnesses:
Chas. Nida.
Geo. H. Graves

Per

Inventor:
George Woods
Munn & Co
Attorneys.

122,079

UNITED STATES PATENT OFFICE.

GEORGE WOODS, OF CAMBRIDGEPORT, MASSACHUSETTS.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. 122,979, dated January 23, 1872.

Specification describing certain Improvements in Reed-Organs, invented by GEORGE WOODS, of Cambridgeport, in the county of Middlesex and State of Massachusetts.

My invention consists of an arrangement of an additional wind-chest reed and sounding-box, such as is described in my patent of September 13, 1870, relatively to the common wind-chest whereby the apparatus for working the valves of the said attachment is simplified and improved. The invention also consists of a combination of a sheet or web of India-rubber coated cloth or other equivalent substance, with the sounding-board of the aforesaid additional wind-chest for varying and improving the tones.

Figure 1 is a transverse section through the key-board, the ordinary wind-chest, and the additional one of an instrument having my improvements applied to it, the section being taken on the line *x x* of Fig. 2. Fig. 2 is a section on the line *y y* of Fig. 1. Figs. 3 and 4 are details of the tremolo attachment.

A represents the wind-chest. B the valves, and C the keys of the ordinary arrangement. D is the additional wind-chest. E the valves. F the sounding-box. G the sounding-box of the tremolo attachment, and I and K the means of opening the valves by the keys. L is a valve-box through which the wind is allowed to pass from chest D to A when required, by lifting the valve M, which is actuated by the levers O P and the cranked rod R, the lever O being connected with any suitable apparatus by which the operator can actuate it when at the key-board. Now, by arranging the wind-chest D and its sound-chest F vertically, as here shown, so that the valves E may be vertical, I am enabled to open said valves by rods I and sector pieces K, arranged relatively to the keys, as shown, being a more simple, cheap, and efficient arrangement than any heretofore used, requiring only two pieces additional to the common action. I now propose to employ a web or sheet of India-rubber coated or other equivalent webbing of flexible material which is applied to the rear wall T of the wind-chest D, as shown—that is to say, an opening of suitable size is formed in said wall, and a plate of wood or metal applied to cover or close the same on the inside, but provided with with a central aperture, V. The rubber sheet is similarly applied on the outside of the wall so that a chamber, Y, is formed between it and the aforesaid plate into which the air enters through the aperture V. This arrangement has the effect of rendering the sounds peculiar or of a quality not obtainable in other instruments.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The vertically-arranged valves E, keys C, horizontal rods I, sector pieces K, wind-chest D, and sound-box F, combined substantially as specified.

2. The flexible webbing and apertured plate applied to the wind-chest D, substantially as specified.

GEORGE WOODS.

Witnesses:
A. M. WOODS,
JOHN MCDUFFIE.

R. N. WYATT.

Improvement in Cotton Presses.

No. 124,307. Patented March 5, 1872.

Fig. 1.

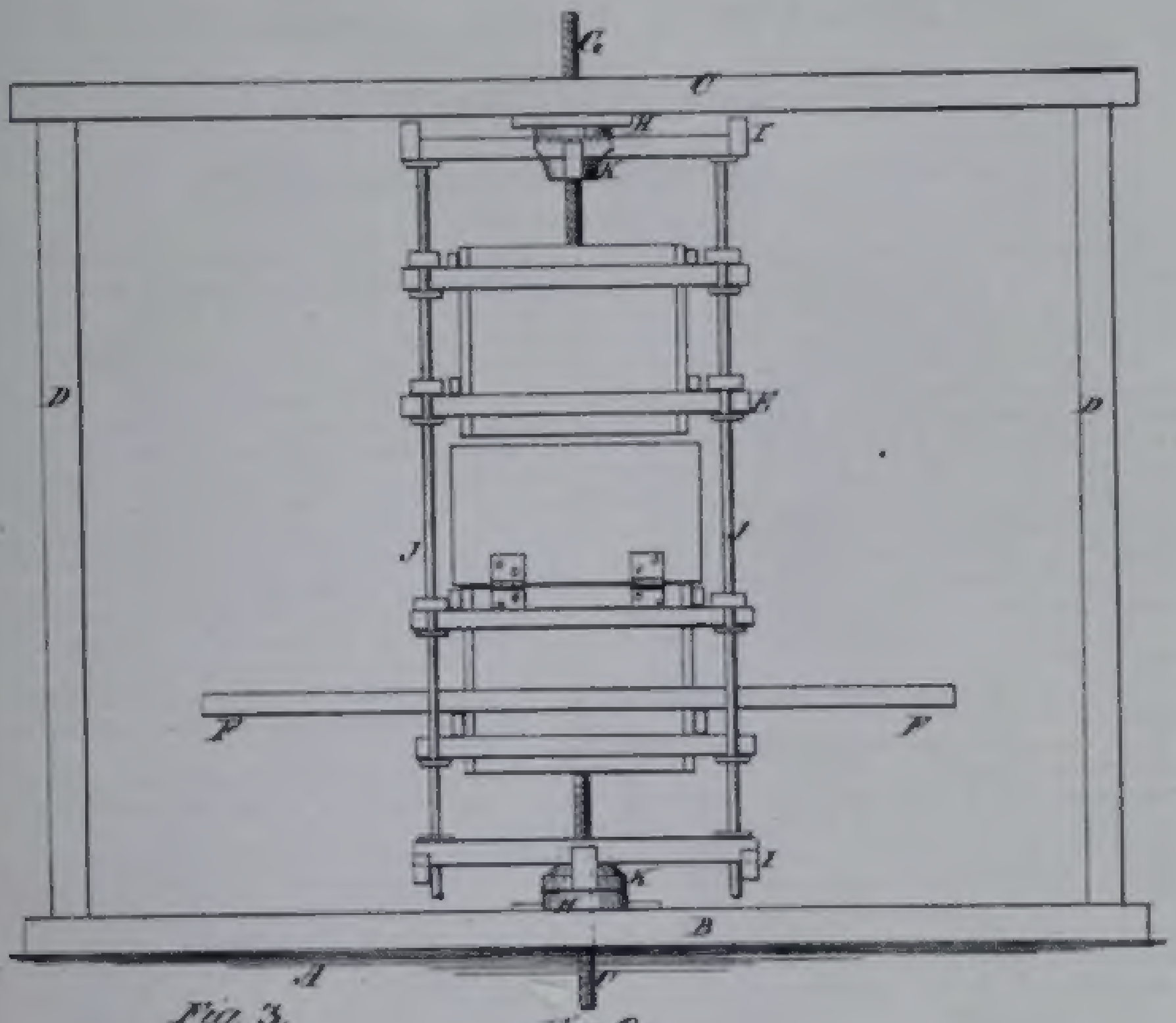


Fig. 3.

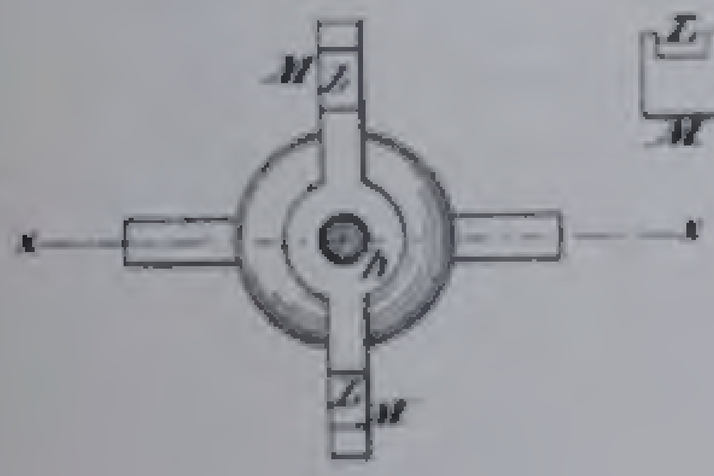
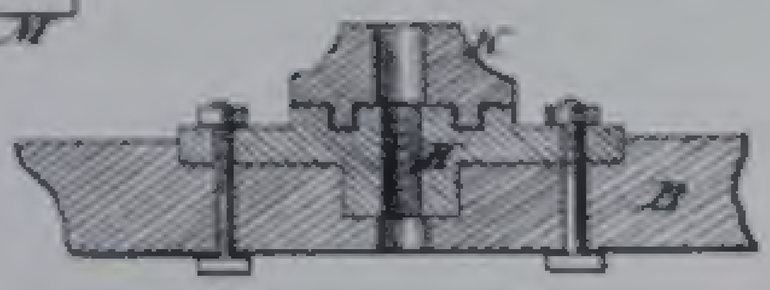


Fig. 2.

Fig. 4.



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124,307

UNITED STATES PATENT OFFICE.

ROBERT N. WYATT, OF TEHULA, MISSISSIPPI.

IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 124,307, dated March 5, 1872.

Specification describing a new and useful Improvement in Cotton-Presses, invented by ROBERT N. WYATT, of Tehula, in the county of Holmes and State of Mississippi.

The object of this invention is to improve machines used for pressing cotton and other articles or substances; and it consists in the revolving frictional bearings of the press, constructed and arranged as hereinafter described.

In the accompanying drawing Figure 1 is an elevation of a press, to which my improvement is applied. Fig. 2 is a side view of one of the frictional bearings detached. Fig. 3 is a top view of the same. Fig. 4 is a vertical section of Fig. 3, taken on the line *x x*, showing a portion of the supporting frame.

Similar letters of reference indicate corresponding parts.

A is a stationary frame, consisting of a mud-sill, B, and girder C, connected together by the uprights D D. E is the press, which is revolved upon my improved bearing by power applied by means of the levers F F. G G are screws, one of which is a right and the other a left-hand-threaded screw. These screws are revolved with the press. They pass through the sill and girder, and engage with the screw-nuts H H, which are bedded in the sill and girder B and C, as seen in the drawing. On the inner end of each of these screws is a follower, which, as the press is revolved, approach each other and press the cotton or other substance between them, or recede from each other by reversing the motion. The construction of the press E is seen in Fig. 1. The end-frames I I are constructed together by the rods J, and the frames are connected with the friction-caps K K by means of the gains L L in the lugs M of those caps. The bed-nuts H H and friction-caps K K are grooved and ribbed, substantially as seen in Fig. 4, so that, as the press revolves there can be no lateral motion, and so that the screw will always be kept in a central position and not be subjected to undue strain or danger of fracture at these points. By thus improving the frictional points the revolving press is made strong and durable; it is not liable to break or get out of order; besides the improvements render these parts of the press much more simple and inexpensive than they have heretofore been.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The grooved or ribbed cap K, in combination with the bed-nut H, constructed and arranged as and for the purpose described.

2. The lugs M M and gains L L on the cap K, substantially as and for the purposes described.

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